SANYO

FILE NO.

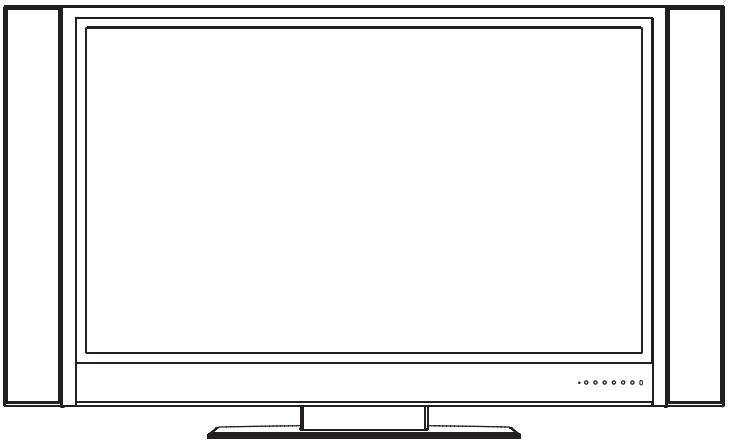
SERVICE MANUAL

PDP TV

PDP-42XR7Z

PRODUCT CODE No.

1 682 344 45: PAL/SECAM



REFERENCE No.: SM0915018

CONTENTS

Safety precautions…… 1
Alignment instructions …… 3
Method of software upgrading…… 6
Working principle analysis of the unit…… 13
Block diagram…… 14
IC block diagram…… 15
Wiring diagram …… 22
Troubleshooting guide …… 23
Schematic diagram…… 32
APPENDIX-A: Assembly list
APPENDIX-B: Exploded View

Note: This maintenance manual is intended only for the reference of the maintenance people. Please pay attention to the following points before carrying out the maintenance work.

Safety Precautions

Please read the “Points for attention for the Maintenance & Repair of PDP” and “Criterion for Identifying the Defects on Screen” as below, before inspecting and adjusting the TV set.

1. “Points for attention for the Maintenance & Repair of PDP”

To avoid possible danger, damage or jeopardy to health and to prevent PDP screen from new damage, the maintenance people must read the following carefully. If they ignore the following warnings, there will be deathful risks:

1.1 Screens vary from one model to another and therefore not interchangeable. Be sure to use the same type of screen in the replacement.

1.2 The operation voltage is approximately 350V for PDP module (including screen, driving circuit, logic circuit and power module). If you want to conduct maintenance work on PDP module when the set is in normal operation or just after the power is off, you must take proper measures to avoid electric shock and never have direct contact or touch with the circuitry of the working module or metal parts. That’s because within a short time relatively high voltage still remains on the capacitor of the driving part even after the power is off. Make sure to begin relevant maintenance operation at least one minute after the power is off.

1.3 Don’t apply on the module any power supply that is higher than the specification. If the power supply used deviates from the value given in the specification, there might be a possibility of leading to fire or damage to the module.

1.4 Never have operation or mounting work under unsuitable environment such as areas in the vicinity of water – bathroom, laundry, water chute of kitchen – sources of fire, heat-radiation parts or direct exposure to sunlight. Otherwise there will be kickbacks.

1.5 In case foreign substances such as water, liquid, metal slices or others fall into the module carelessly power must be cut off immediately. Keep the module as it is and do not move anything on the module. Otherwise it might be possible to contact the high voltage or cause shock short circuit so that it may lead to fire or electric shock.

1.6 If there is smoke, abnormal smell or sound from the module, please cut the power off immediately. Likewise in case the screen doesn’t work when the power is on or during the operation, please also cut off the power at once. No more operation in this case.

1.7 Do not remove or plug its connection wire when the module is in operation or right after the power is off. That’s because there remains a relatively high voltage on the capacitor of the driving circuit. If there is a need to remove or plug in the connection wire, please wait at least one minute after the power is off.

1.8 Considering the module has a glass faceplate, please avoid extrusion by external force lest it should cause glass breakage that may get people injured. Two people are needed in cooperation to move this module lest contingency takes place.

1.9 The complete TV set is designed on the basis of full consideration of thermal dissipation by convection, with the round hole on the top for heat emission. To avoid overheat, please do not have any covering on the hole during normal operation and never put it in the place where the space is narrow and in bad ventilation.

1.10 There is quite a number of circuits in PDP that are integrated ones. Please be on guard against

static electricity. During maintenance operation be sure to cover yourself with anti-static bag and before operation make sure to have it sufficiently grounded.

1.11 There are a big number of connection wires distributed around the screen. Please take care not to touch or scuff them during maintenance or removing the screen, because once they are damaged the screen will fail to work and it's not possible to repair it.

If the connection wires, connectors or components fixed by the thermotropic glue need to disengage when service, please soak the thermotropic glue into the alcohol and then pull them out in case of damage.

1.12 Connector for the circuit board of the screen part is relatively fine and delicate. Please take care in the replacement operation lest it should get damaged.

1.13 Special care must be taken during transportation and handling because strenuous vibration could lead to screen glass breakage or damage on the driving circuitry. Be sure to use a strong outer case to pack it up before transportation or handling.

1.14 Please put it for storage in an environment in which the conditions are under control so as to prevent the temperature and humidity from exceeding the scope stipulated in the specification. For prolonged storage please cover it with anti-moisture bag and have them piled and stored in one place. The environmental conditions are tabulated as below:

Temperature	Scope for operation	0~50centigrade
	Scope for storage	-15~60centigrade
Humidity	Scope for operation	20%~80%
	Scope for storage	20%~80%

1.15 If a fixed picture is displayed for a long time, difference in its brightness and color may occur compared with movable pictures. But it doesn't show any problem and the reason is that there is reduced density of fluorescent powder in the former. On the other hand, even if changes take place in the picture, it can keep its brightness for a period of time (several minutes). It's a feature inherent with plasma and it's not abnormal. However please try as much as possible to avoid showing a still picture of high brightness for a long time during operation.

1.16 As a digitalized display devise, this module is provided with error diffusion technology and the gray scale and false enhancement of contour can be displayed by reusing of sub-field. As compared with cathode ray tube, it can be found in the moving picture that at the brim of the face of a person there are some wrong colors.

1.17 During the display of graph (indicating the gradual change in brightness horizontally or vertically) resulting from gray scale test it can be found that the brightness for the two adjacent levels is uneven. This is caused by the reuse of sub-field, the display of load rectification and the electrolysis.

1.18 The screen front plate is of glass. Please make sure that the screen has been put in place during erection. If it is not in place before the erection begins it may lead to screen crack or breakage.

1.19 Make sure the screw used in the mounting of the screen is of the original specs lest it should cause damage to the screen due to mismatch. Special care should be taken not to use too long or too big screw.

1.20 Care must be taken to guard against dust during assembling or dismantling, especially to avoid dirt from falling in between the screen and the glass lest it should harm the receiving and viewing

effect.

1.21 There is piece of insulator stuck on the rear chassis corresponding to the power supply board. It is used to isolate the cool part from the hot part. Please take care to keep it intact lest it should become a potential safety trouble.

1.22 In addition to plasma screen, the glass is a part of high value. It has such functions as anti-radiation, adjustment of color temperature etc. Please handle it carefully.

Alignment instructions

1. Test equipment

PM5515 (video signal generator)

VG-849 (YUV, VGA, HDMI signal generator)

CA100 (white balancer)

2. The alignment flow chart (see below figure)

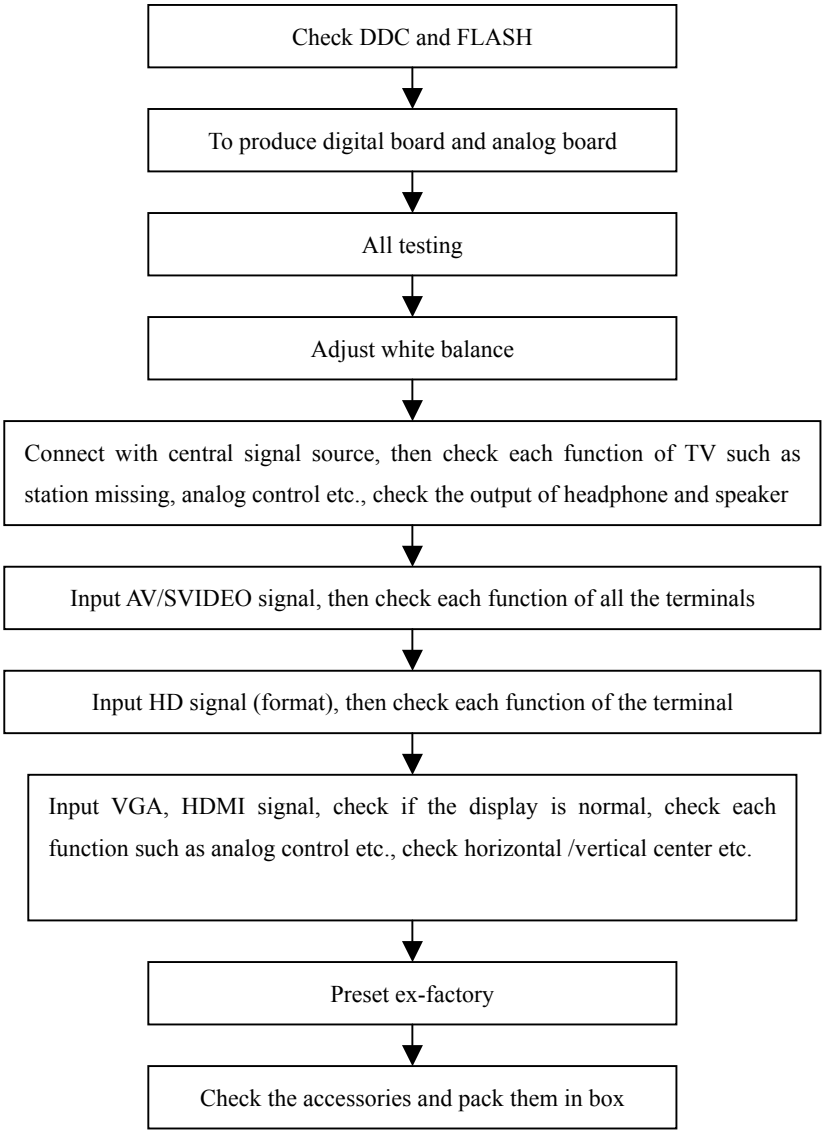

Check DDC and FLASH
To produce digital board and analog board
All testing
Adjust white balance
Connect with central signal source, then check each function of TV such as station missing, analog control etc., check the output of headphone and speaker
Input AV/SVIDEO signal, then check each function of all the terminals
Input HD signal (format), then check each function of the terminal
Input VGA, HDMI signal, check if the display is normal, check each function such as analog control etc., check horizontal /vertical center etc.
Preset ex-factory
Check the accessories and pack them in box

Fig-1 adjustment flow-chart

3. Description of adjustment

3.1 Unit adjustment

Connect the digital processing board, analog board, power board, power filter board and button board according to the wiring diagram. Connect with power and observe the display.

3.2 Method for using factory menu

Press ”Source” button, then press”2580” to enter level one factory menu. Press ”▲” and “▼“ to select adjustment page of the level one factory menu, then press “OK” to access. Press “▲” and “▼“ to move cursor up and down, when the cursor stays on a certain adjustment item, you can adjust it according the prompt. Press “MENU” exit to the level one factory menu; press “MENU” again to exit from the factory menu. The adjustment item is list as table 1.

Table 1 adjustment item

No.	Item	Specification
1	Factory Preset	Reset to the default data
2	Spatial NR	Noise reduce setting, the preset data of each channel is different, please don’t change it.
3	Speckel NR	
4	Temporal NR	
5	White Balance	White balance adjustment
6	Auto Color	A/D correction
7	DTV Manual Scan	If search DTV at manual scan, default= Off

3.3 adjustment of white balance

3.3.1 input 16 level gray-scale signal from VG849 to HDMI channel (TMIING: select a support format of HDMI), enter white balance adjustment page of factory menu, select cool color temperature of item, fixed GG to 5000, adjust RG, BG, let the color coordinate of third level on the right be (270,283) at 120nits; fixed BO to 5000, adjust RO, GO, let the color coordinate of third level on the left be (270,283) at 5nits. The brightness of 120nits and 5nits may obtain by adjusting the contrast and brightness of menu.

3.3.2 input 16 level gray-scale signal from VG849 to AV channel (TMIING:968), enter white balance adjustment page of factory menu, select cool color temperature of item, fixed GG to 5000, adjust RG, BG, let the color coordinate of third level on the right be (270,283) at 120nits; fixed BO to 5000, adjust RO, GO, let the color coordinate of third level on the left be (270,283) at 5nits. The brightness of 120nits and 5nits may obtain by adjusting the contrast and brightness of menu.

3.3.3 input 16 level gray-scale signal from VG849 to VGA channel (TMIING: select a support format of VGA), enter white balance adjustment page of factory menu, select cool color temperature of item, fixed GG to 5000, adjust RG, BG let the color coordinate of third level on the right be (270,283) at 120nits; fixed GO to 5000, adjust RO, BO, let the color coordinate of third level on the left be (270,283) at 5nits. The brightness of 120nits and 5nits may obtain by adjusting the contrast and brightness of menu.

3.3.4 input 16 level gray-scale signal of 480P from VG849 to YPbPr channel, enter white balance adjustment page of factory menu, select cool color temperature of item, fixed RG, GG, BG to 5000, and RO to 5000, adjust RO, BO, let the color coordinate of third level on the left be (270,283) at 5nits. The brightness of 5nits may obtain by adjusting the contrast and brightness of menu.

Note: the white balance adjustment of VGA and YPBPR must be done at the situation that the white balance adjustment of HDMI is accurate.

4 Performance check

4.1 TV function

Connect RF-TV terminal to the central signal source, enter the setup menu→ auto search, check if there is station skipping, the output of earphone and speaker, the picture are normal. Especially check the signal of PAL and DVB-T, check if the S/PDIF output of DVB-T is normal.

4.2 AV/S-VIDEO terminal

Input AV/S signal, check if the picture and sound are normal. The main system is NTSC and PAL.

4.3 YPbPr/YCbCr terminal

Input YUV signal (VG-849 signal generator), separate input YUV format signal of table 2 and check if the picture and sound are normal.

Table 2 YUV signal format

No	H-frequency (KHz)	V-frequency (KHz)	Signal
1	15.734	59.94	SDTV 480i
2	31.469	59.94	HDTV 480p
3	44.955	59.94	HDTV 720p
4	33.716	59.94	HDTV 1080i
5	15.625	50	SDTV 576i
6	31.25	50	HDTV 576p
7	37.5	50	HDTV 720p

4.4 VGA terminal

Input VGA signal (VG-849 signal generator), separate input VGA format signal of table 3 and check if the picture and sound are normal. If the image is deflection of the H/V-field, select manual correction of Advanced Video Menu.

4.5 HDMI terminal

HDMI signal format receives the 8 high-definition signals: 480I, 480P, 720P/60 Hz, 1080I/60 Hz, 576I, 576P, 720P/50Hz,1080I/50Hz except for the table 3 signal. Separate input the signals from VG-849. Check if the image (contain HDCP ON and OFF) and sound are normal, if the output of S/PDIF is normal.

Table 3 VGA signal format

No	Resolution	H-frequency(kHz)	V-frenquency(Hz)	Point clock pulse frenquency(MHz)	Remark
1	720 X 400	31.469	70.086	28.322	IBM
2	640 X 480	31.469	59.94	25.175	IBM
3	640 X 480	37.861	72.809	31.5	VESA
4	640 X 480	37.5	75	31.5	VESA
5	640 X 480	43.269	85.008	36	VESA
6	800 X 600	35.156	56.25	36	VESA
7	800 X 600	37.879	60.317	40	VESA
8	800 X 600	48.077	72.188	50	VESA
9	800 X 600	46.875	75	49.5	VESA
10	800 X 600	53.674	85.061	56.25	VESA
11	1024 X 768	48.363	60.004	65	VESA

12	1024 X 768	56.476	70.069	75	VESA
13	1024 X 768	60.023	75.029	78.75	VESA

5 Ex-factory setting of user menu

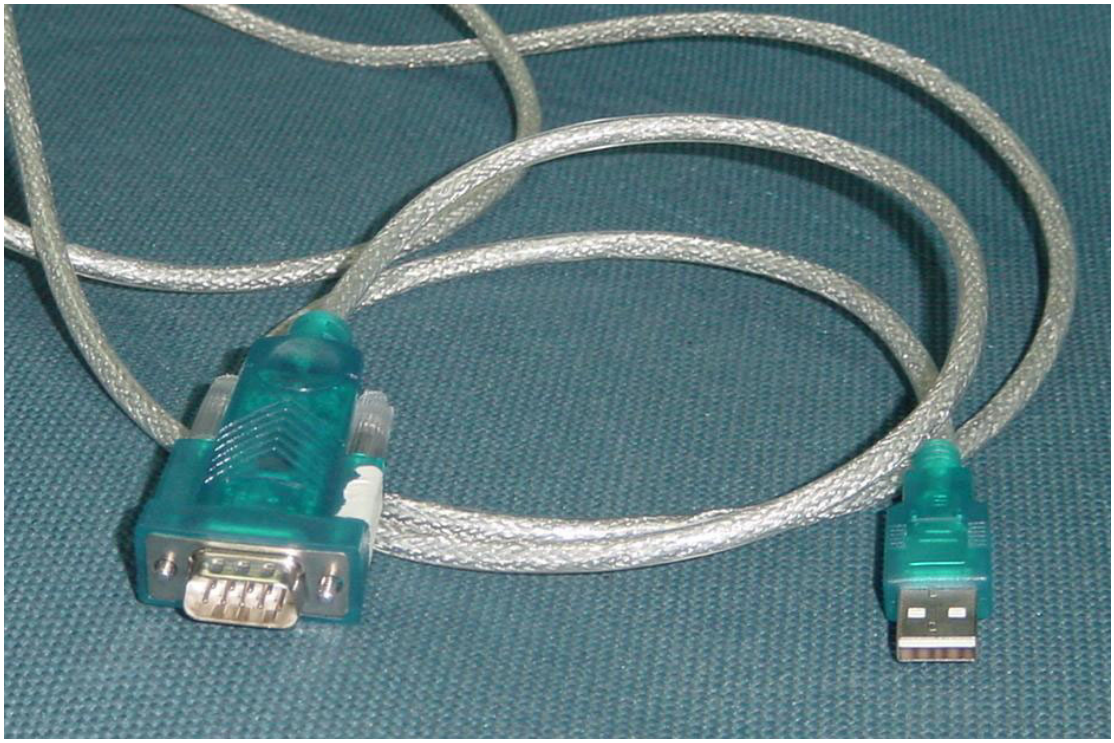
1) Select TV channel, volume: 40
2) Video menu, Picture Mode: Vivid (other items: Mild, Custom, Standard), Aspect Ratio: Wide
3) Video menu, Advanced Video Menu:
   Color Temperature: Cool
4) Audio menu, Audio Mode: Speech (other items: Custom, Music, Movie)
   Balance: 50, SPDIF Mode: Auto, HP Volume:50
5) Rate menu, Rating: No Block, Parent Lock: off
6) System menu, State: NSW/ACT (other items: VIC, QLD, SA, WA, TAS, NT)

Note: the default password of Rate menu is”0000”

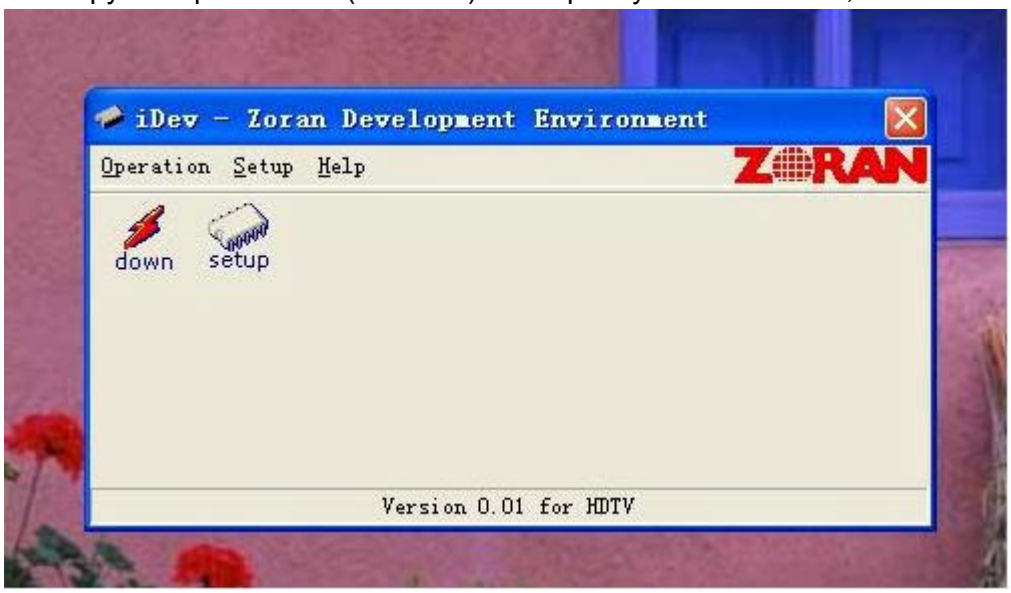
Method of software upgrading

1. Connect RS-232 cable to computer and TV set. **The cable must be a female to female RS-232 cable, and the line is TXD to RXD and RXD to TXD cross-link.** It’s popular for PC to PC connection.

2. If the computer has no RS-232 serial port(e.g. Notebook PC),you needs a additional USB to serial port cable.



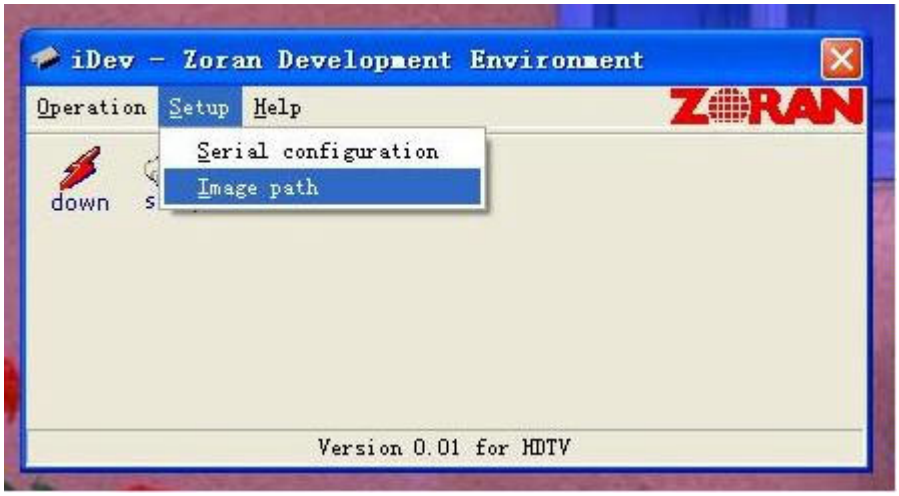
3. Copy the update tools (iDev.exe) to the path you want to do it, and double click it.



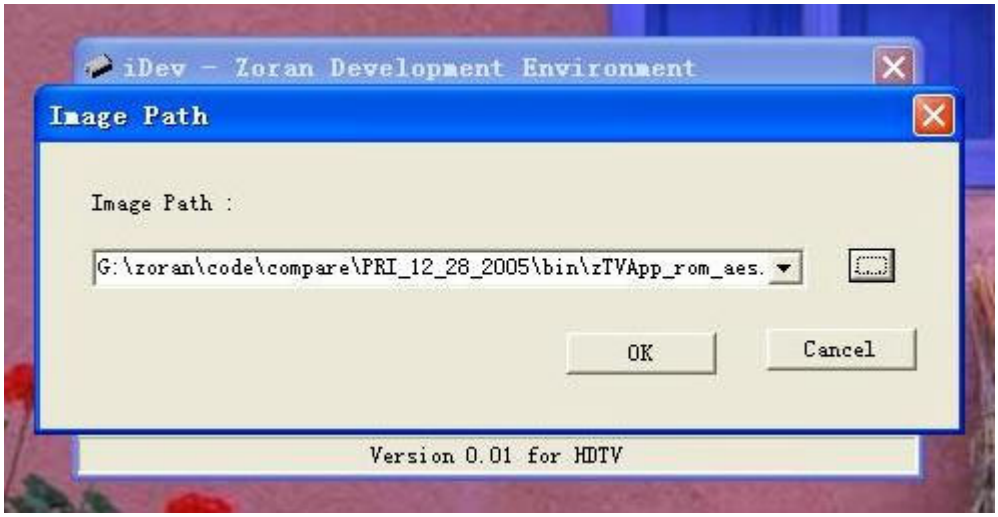
4. Select “setup” menu.

5. Confirm the Serial port is right. Base on the port which using for update. And set the band rate to 115200 (default).

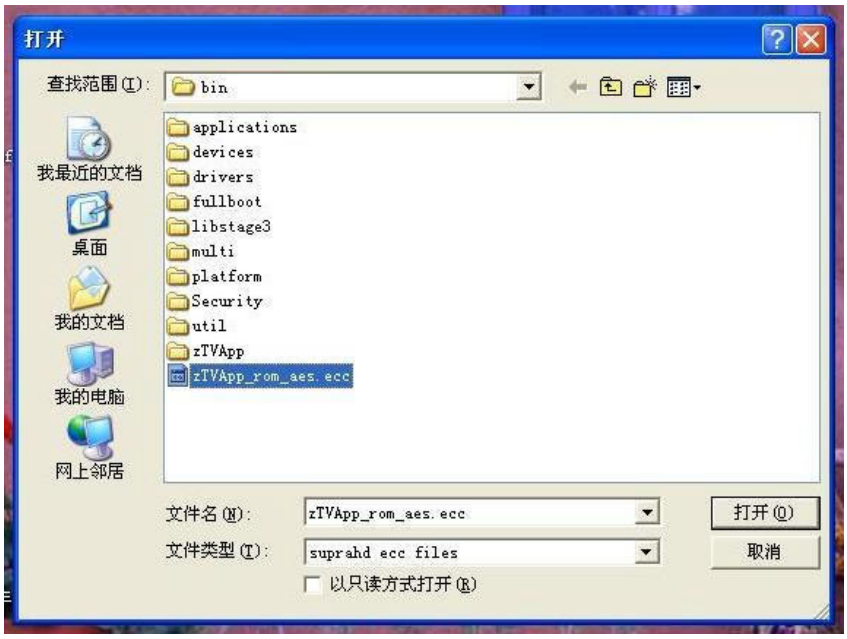
6. Select the “Image path” menu.



7. Confirm it's the right file.



8. If it's not right(Maybe you didn't select it before),click the "…"button to select "*.ecc" file. Sometimes the image file you got it will be "*.rar "or "*.zip" zip file, needs unzip it first.

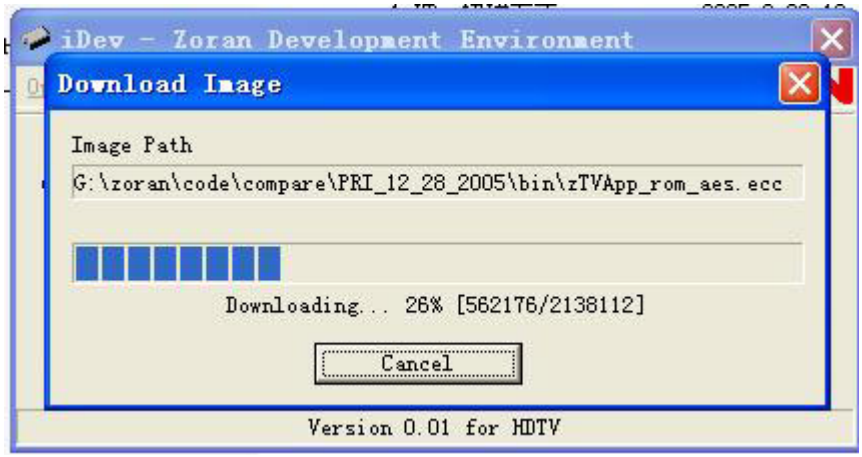


9. You also can click the setup button to select and config, but **please don't select the red one(update boot sector).**

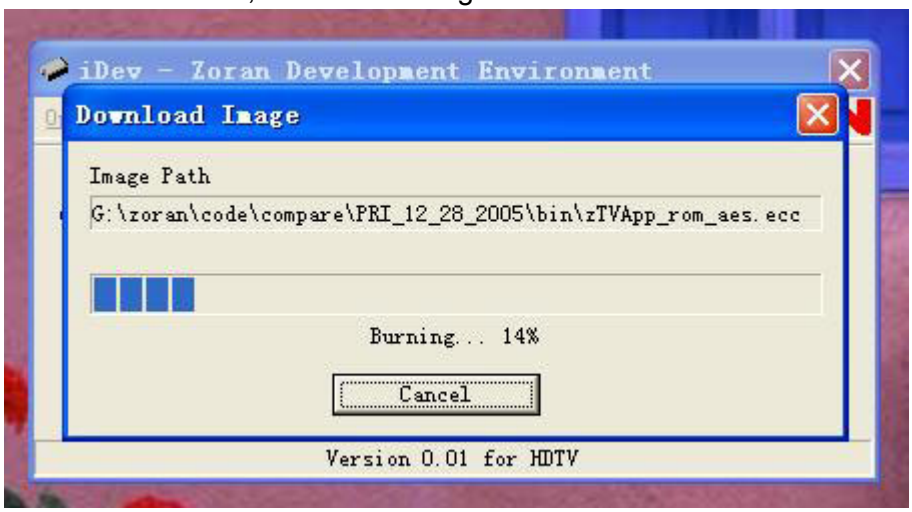
10. Then click the “down” button.

11. You can see the “waiting” window.

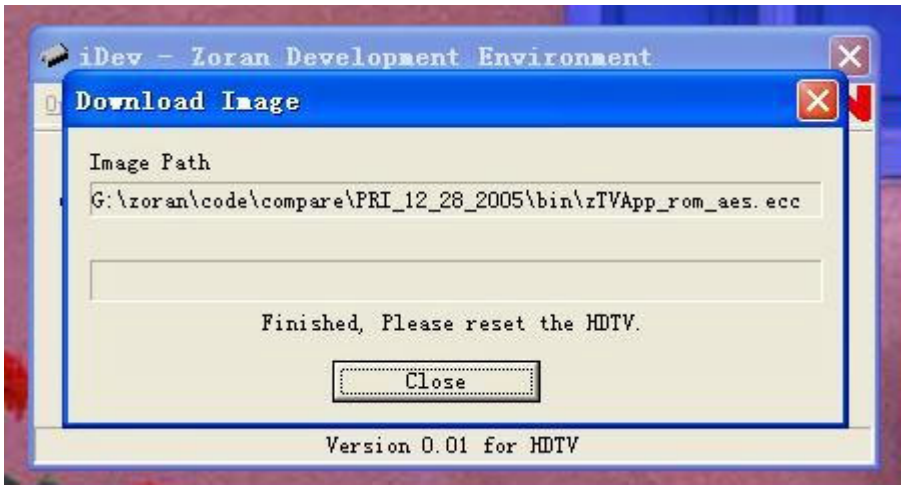
12. Then power (off then) on the TV set.



13. After download, it will be burning.



14. Last it will be finished



15. Press the (IR/ locate keypad) power key and holding for several second to force power off TV set, then power on again. It would be ok now. If it's failure you can try once again.

Working principle analysis of the unit

1. PAL-BG signal flow:

Antenna reception PAL-BG signal send to the integrative tuner FQD1216, which contains HF and IF amplifier circuit and video decoding circuit. It is controlled by main IC ZR39660 (inside CPU) through I2C bus. The PAL-BG signal via frequency tuning, HF amplification, IF amplification, system switching and decoding, output video signal TV-CVBS of 1Vpp and sound IF signal (SIF).

TV-CVBS and AV1-CVBS, AV2-CVBS input from AV terminal, via switch IC HEF4052 to output signal, one way send to ZR39660 for VEDIO DECODER, DEINTERLACE and SCALER, then send to LVDS level drive for LCD screen, another way is output through AV output socket as AV OUT.

The sound IF (SIF) is fed into demodulation IC SGTV5810, via demodulate, pre-amplify, woof adjust and volume control, output left/right sound signal to digital audio amplifier mp7722 amplify, then send to speaker.

2. DVB-T signal flow:

Antenna reception DVB-T signal send to tuner FQD1216, after frequency tuning, HF amplification, IF amplification and SAW FILTER, output IF signal to demodulation chip DRX3975, via QAM demodulation, fed to ZR39660 for information source decoding in the format of standard serial TS stream.

HD video signal via decoding to A/D conversion and OSD superposition, at last send to LVDS drive level for PDP panel.

HD audio signal, via decoder built-in ZR39660, resumed to multi- channel sound of Dolby AC-3, at the same time output data stream of I2S format and S/PDIF data stream. Audio data of I2S format is fed to audio D/A conversion chip CS4345 to output analog L/R signal. S/PDIF data stream is directly output from optical fiber interface.

3. PC/YPrPb signal flow

PC and two YPBPR signal via matched resistance, then a-c couple to Triple Video A/D Converter TDA8759 A/D conversion. Send B/G/B of 24 bit to main IC ZR39660 digital decode, image scale and OSD superposition, then send to LVDS level drive for LCD screen.

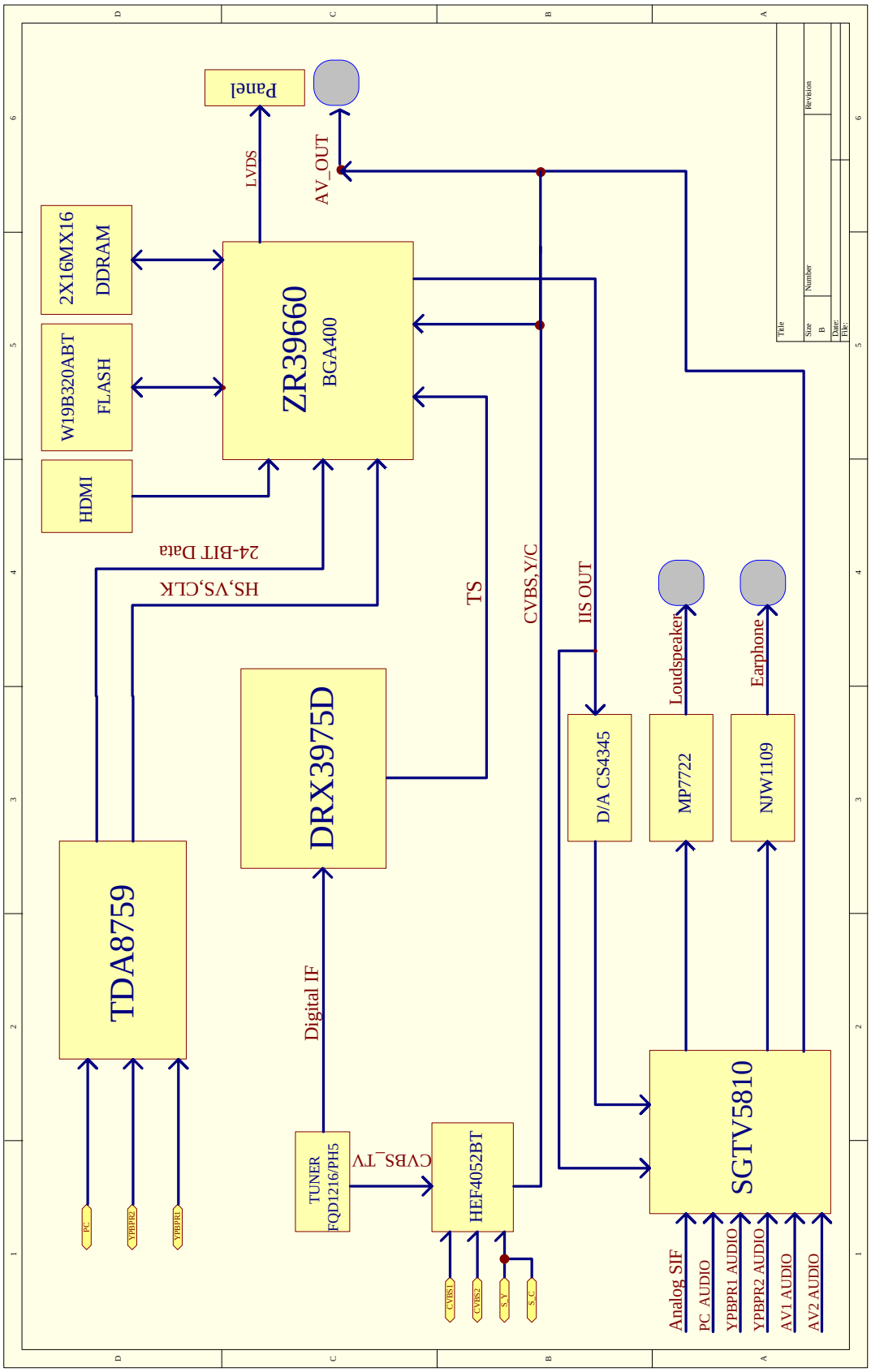
Sound signal (PC, YPrPb) via matched resistance and a-c couple, then send to SGTV5810 (sound processing and volume control) switch of audio. Select right/left sound channel, their send to digital sound amplifier MP7722 amplify, then send to speaker.

4. HDMI signal flow

HDMI video signal is directly fed to main IC ZR39660 (with HDCP function of HDMI) digital decode, image scale and OSD superposition, then output LVDS drive level for screen.

HDMI audio signal via decoder built-in ZR39660, output data stream of I2S format and S/PDIF data stream at the same time. Audio data of I2S format is fed to audio D/A conversion chip CS4345 to output analog L/R signal. S/PDIF data stream is directly output from optical fiber interface.

Block diagram



IC block diagram

1. ZR39660

- **Embedded Processing Unit**
  - Integrated High-Performance MIPS® 4KEc™ CPU, 166 MHz
  - Intended to run RTOS, audio decode and Application software
  - 32-bit MIPS32 enhanced architecture
  - 8K instruction cache, 8K data cache, (4-way set associative)
  - MMU with 16-dual entry Joint Translation Lookaside Buffer
  - Two 32-bit Counter Timers for CPU timing functions
  - One 32-bit Watchdog timer
- **Integrated HDMI Link and PHY**
- **High-Performance MPEG-2 Video Decoding Engine**
- **Transport Processing Unit with Integrated CableCard support**
- **Uncompressed Digital Interface**
- **Accelerated 2-D Graphics**
- **Integrated PAL/NTSC Decoder**
- **1394A High Speed Interface (Integrated Link and PHY)**
- **Video Scaling and Format Conversion**
- **Display Processor & Controller**
- **Audio Processing Unit (APU)**
- **System Interfaces**
  - Two 2-signal UARTs
  - Four I^2C master or slave interfaces (up to 400kb/s)
  - One IR Receive, with hardware demodulation
  - Guest bus interface
- **Device Unique Chip ID**
  - 128-bit device unique secret key
- **Memory Interface Unit**
  - High performance 32-bit DDR interface (200MHz)
  - Up to 1.3 GByte/second peak memory throughput
  - 256 MByte memory address range
- **Integrated Digital VCXO**
- **Process Technology**
  - 0.18u CMOS
- **Power**
  - 1.8V core voltage, 2.5 V Memory I/F, 3.3V I/O
- **Packaging**
  - 27mm x 27mm Plastic Ball Grid Array package
  - 400 PBGA

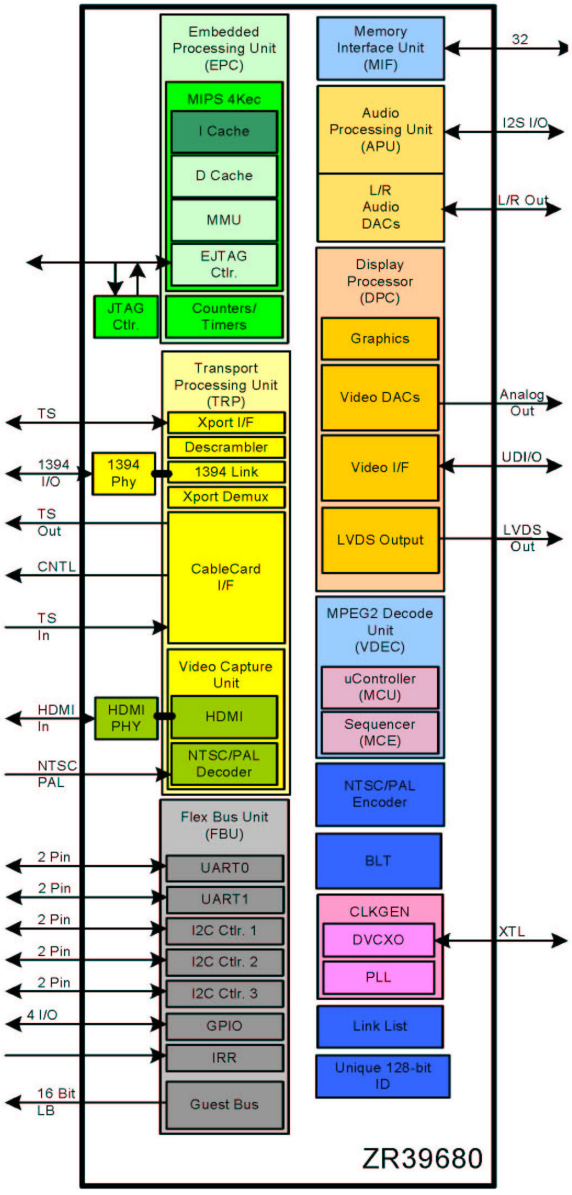


Figure 1 SupraHD-680 IC Block Diagram

Pin descriptions of ZR39660:

(1) Serial Transport Input Port

T4: MPEG Transport Port Input Clock

T3: MPEG Transport Input Data

U3: MPEG Transport Input Frame

Y1: MPEG Transport Input Valid

(2) HDMI Input

D1,E3,F3,E2,F2,E1: HDMI Differential Data Pairs

D2,C1: HDMI Differential Clock Pair

C3: HDMI Serial Clock

B2: HDMI Serial Data
A1: HDMI Hot Plug Detect
D3: HDMI Current Set

(3) NTSC/PAL Analog Input Port
W2:Video Front End Luminance In
Y3:Video Front End Chroma In
W3:Video Front End Common Mode Reference

(4) Analog Video Output
K18:Composite Data Output (CVBS)
J20:Blue/Pb Pixel Data Output
J18:Green/Y Pixel Data Output
J19:Red/Pr Pixel Data Output

(5) Audio I/O
R2:Audio Clock
R3:Bit Clock
P3:Left/Right Channel Selector
U2:Serial Audio Data Input
T2:Serial Audio Data Output
V1:IEC958 Format Out

(6) LVDS Panel Interface
B20,C19: Output Clock Pair
E18,F17: Output Data Pairs 0
C20,D19: Output Data Pairs 1
F18,G17: Output Data Pairs 2
D20,E19: Output Data Pairs 3
E20,F19: Output Data Pairs 4
H18,G18: Output Data Pairs 5
F20,G19: Output Data Pairs 6
G20,H19: Output Data Pairs 7
D18: External Resistor Connection

(7) UART and I2C Interface
N1:UART 0 Transmit
P1 UART 0 Receive
R1:I2C Compatible Clock 0
P2:I2C Compatible Data 0
M3:I2C Compatible Clock 1
M2:I2C Compatible Data 1

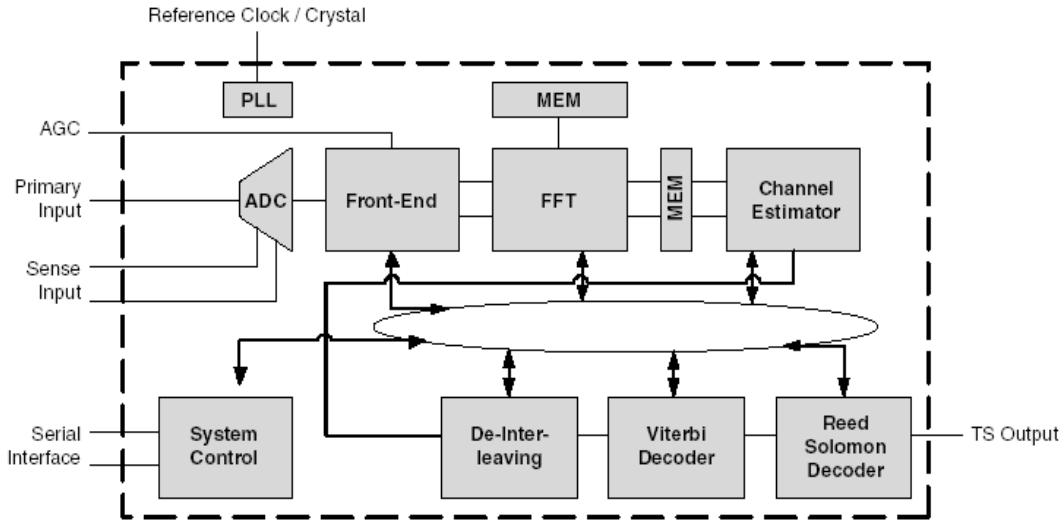
(8) Miscellaneous
M4, N3:Two pins required to support the 24.576 MHz crystal

N5:Power On Reset
L4:Infrared Receive

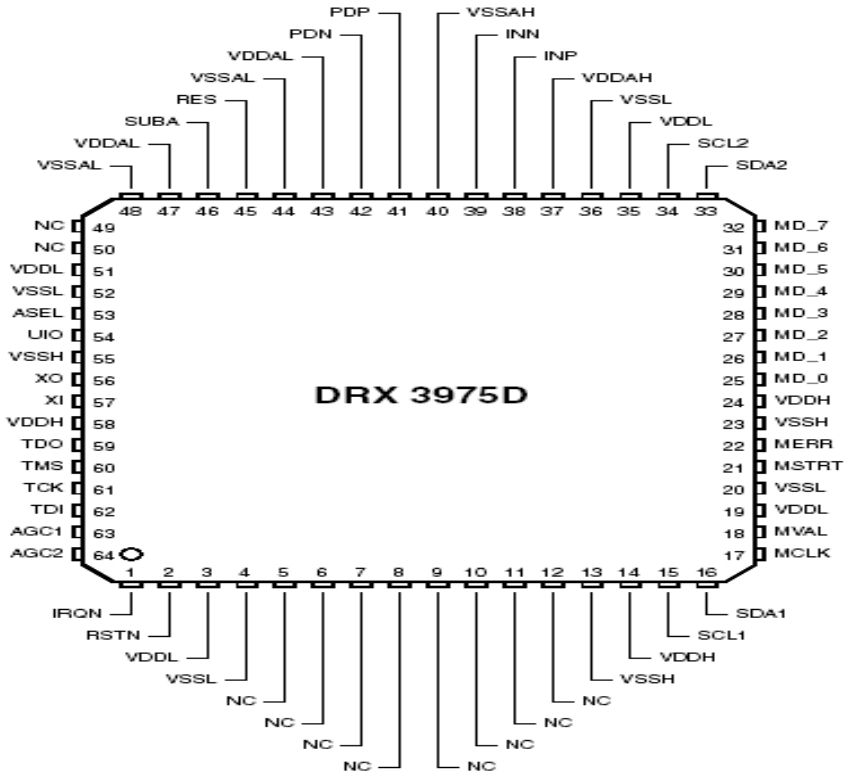
2. DRX3975D

The DRX 3975D is a fourth-generation COFDM demodulator that offers today's highest level of front-end integration resulting in ultimate DVB-T digital reception, compliant to ETS 300 744, DTG D-Book, EICTA E-Book, and Nordig Unified v1.0.2.

The IC applies cutting-edge digital filtering techniques in combination with a high-performance A/D-converter and PLL configuration, resulting in superior performance figures in the presence of digital- and analog adjacent channels.



Pin configuration of DRX3975D:



Pin description of DRX3975D:

2: RESET_N

56, 57: Oscillator

22: Select I2C address

33: I2C data for host communication with the tuner

34: I2C clock to the tuner

15: I2C clock from host

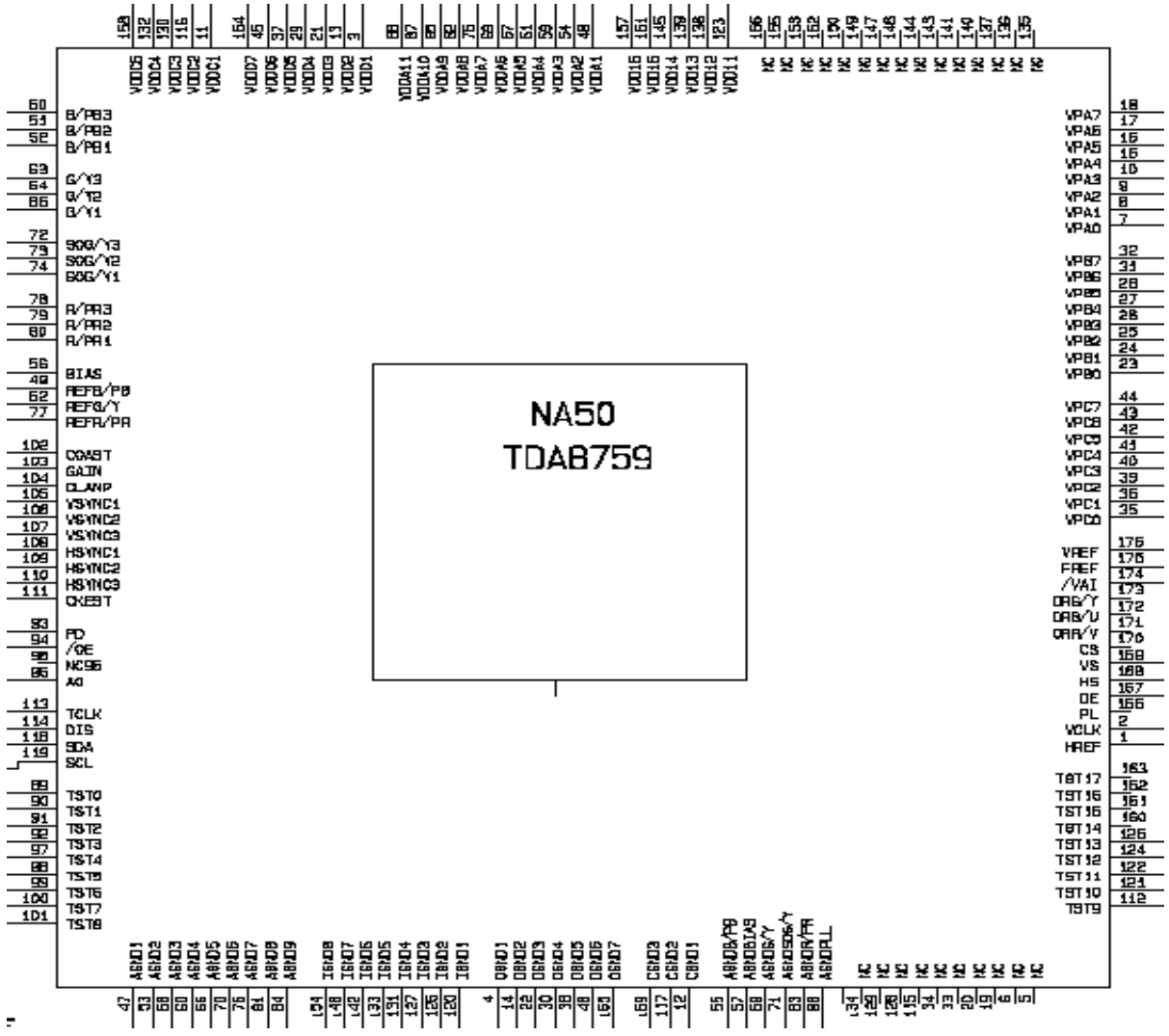
16: I2C data from/to host

38, 39: Differential input for IF

17, 18, 21, 25: Serial Transport Output Port

3. ADC conversion TDA8759

Pin configuration of TDA8759:



Pin description:

78,79,80: Red analog input

63,64,65: Green analog input

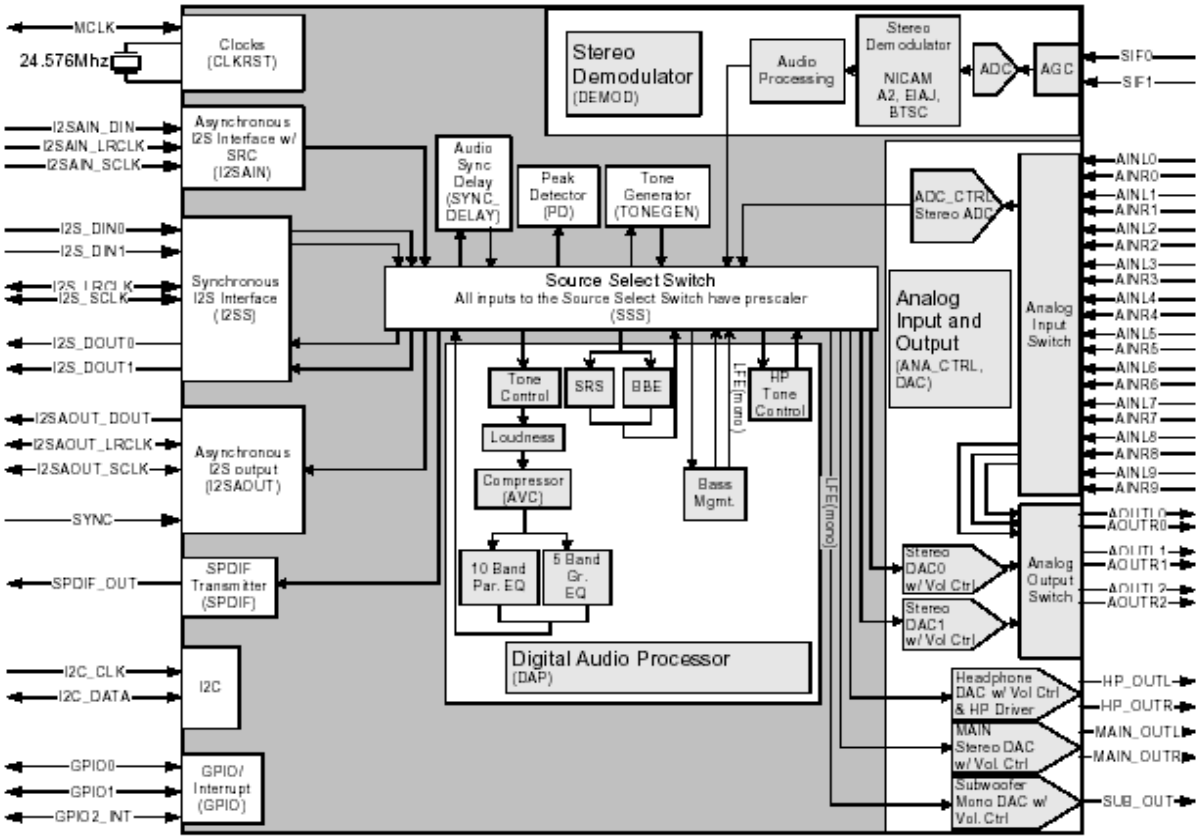
50,51,52: Blue analog input

72,73,74: Sync on Green analog input

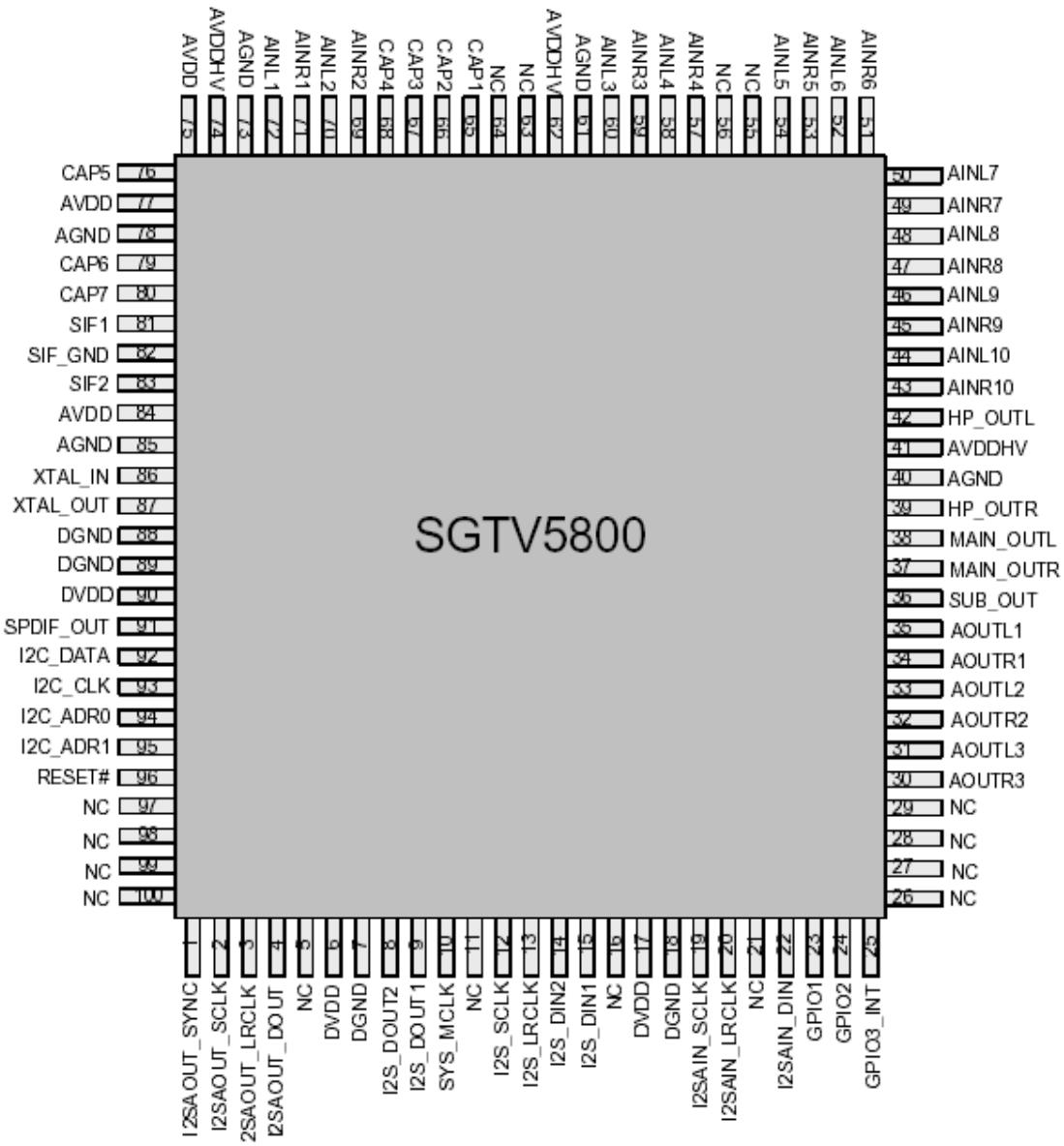
108,109,110: Horizontal SYNC Input
105,106,107: Vertical SYNC Input
29: Hold PLL Frequency, do not track HSYNC
119: Serial Interface clock
118: Serial Interface data pin
96: Serial interface address pin
7-10, 15-18: Red output data
35,36,39-44: Green output data
23-28,31,32: Blue output data
2: Output data clock
167: DE output
168: HSYNC output
169: VSYNC output

4. Audio processor SGTV5810

The SGTV58xy is a TV audio processor designed to serve as a low cost, integrated audio CODEC for hybrid (analog and digital) TVs, digital only TVs, and analog TVs. Other applications include set top boxes or other media applications where a low cost, high fidelity audio processor is required. The SGTV58xy has highly integrated features and input/output that simplify TV audio design.



Pin configuration of SGTV5810:



Pin description of SGTV5810:

69-72,57-60,51-54,43-50: Analog AUDIO INPUT L/R

42,39: EAR PHONE L/R

30-35: AV AUDIO OUT L/R

38,37: MAIN AUDIO OUTPUT L/R

93,92: I2C SDA/SCL

95,94: Serial interface address pin

96: RESET_N

83,81:SIF INPUT

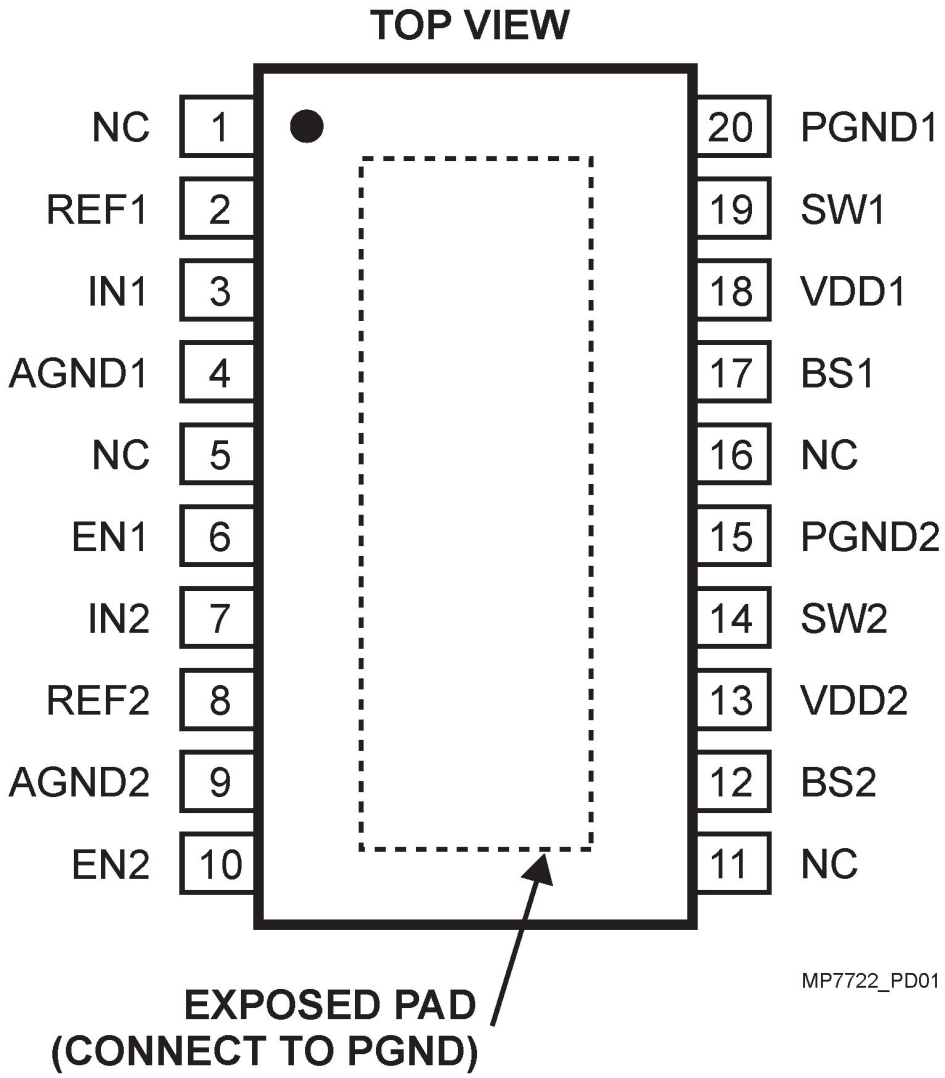
87,86: Oscillator

5. MP7722

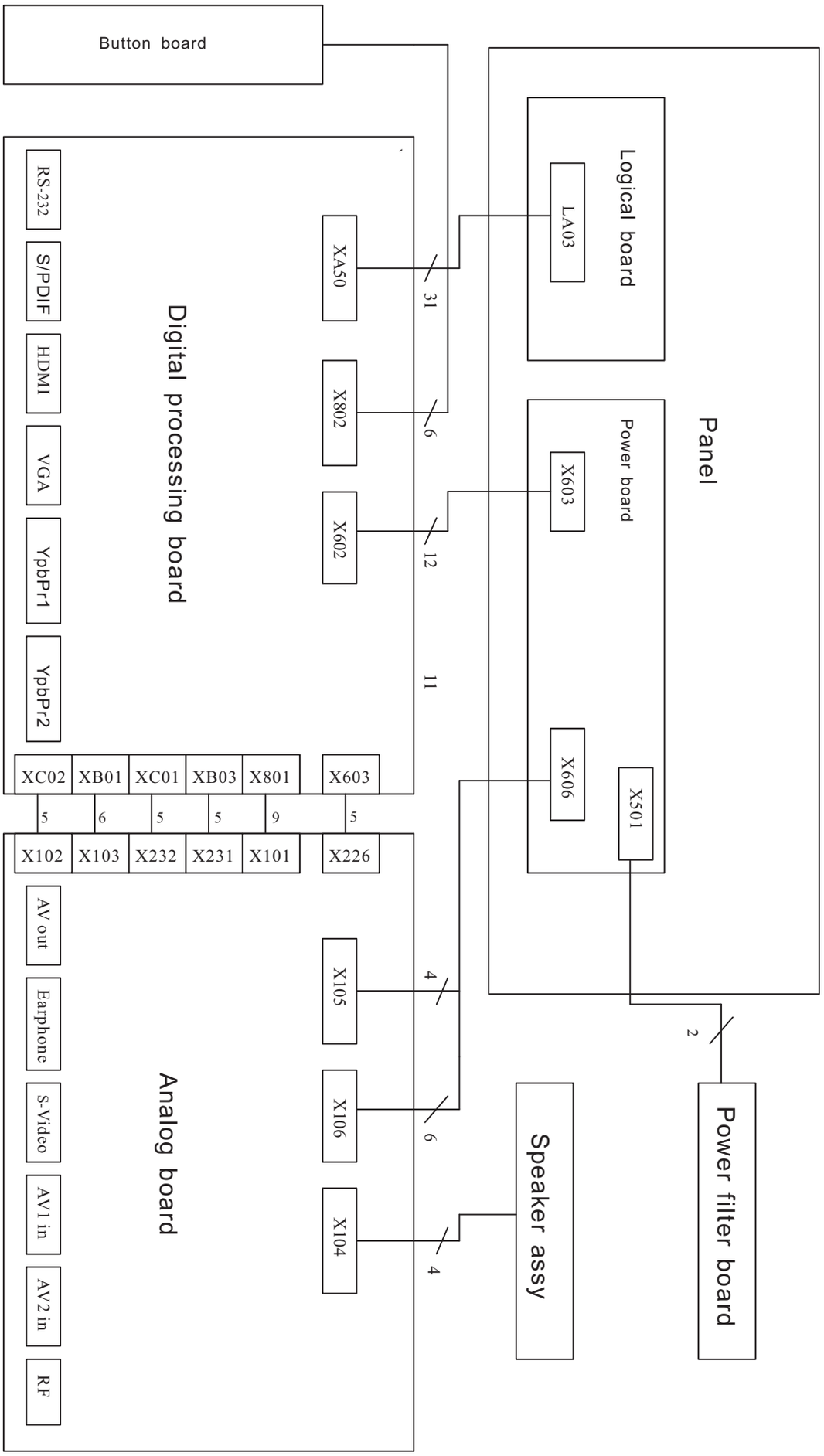
The sound power amplifier MP7722 Class D AMP is the high effective D type of power amplifier of the double track. The BTL output power can reach 20W(10% THD+N) with 6-Ω speakers, +24V power supply, eliminating the need for heat sinks.

The MP7722 is available in the 20-pin thermally enhanced TSSOP package.

Pin configuration of MP7722:



Wiring diagram



Trouble shooting

Before servicing please check to find the possible causes of the troubles according to the table below.

1. Antenna (signal):

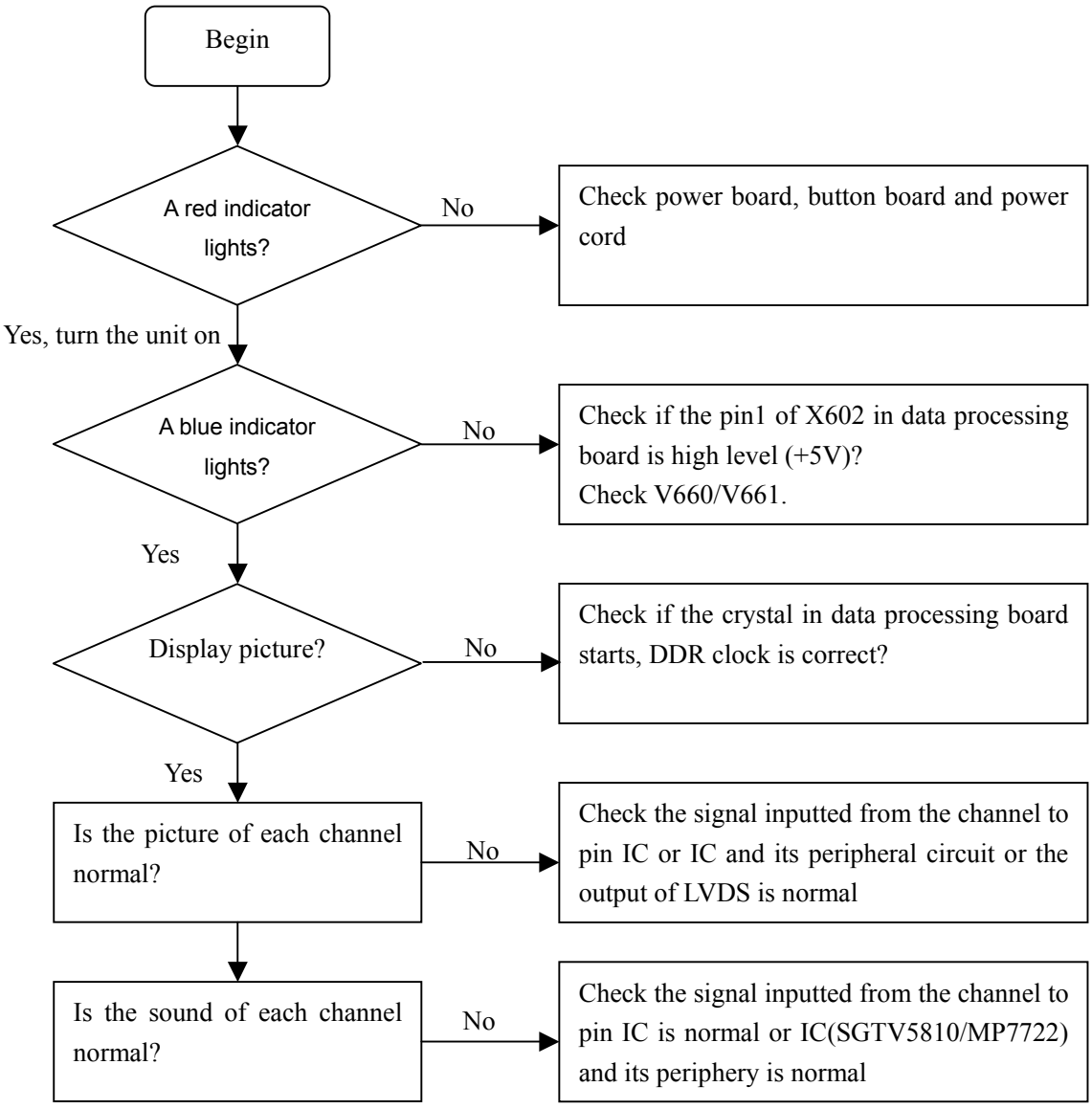
Picture is out of focus or jumping	● Bad status in signal receiving ● Poor signal ● Check if there are failures with the electrical connector or the antenna. ● Check if the antenna is properly connected.
Fringe in picture	● Check if the antenna is correctly oriented. ● Maybe there is electric wave reflected from hilltop or building.
Picture is interfered by stripe shaped bright spots	● Possibly due to interference from automobile, train, high voltage transmission line, neon lamp etc. ● Maybe there is interference between antenna and power supply line. Please try to separate them in a longer distance. ● Maybe the shielded-layer of signal wire is not connected properly to the connector.
There appear streaks or light color on the screen	● Check if interfered by other equipment and if interfered possibly by the equipment like transmitting antenna, non professional radio station and cellular phone.

2.TV set:

Symptoms	Possible cause
Unable to switch the power on	● Check to see if the power plug has been inserted properly into the socket.
No picture and sound	● Check to see if the power supply of liquid crystal TV has been switched on. (as can be indicated by the red LED at the front of the TV set) ● See if it's receiving the signal that is transmitted from other source than the station ● Check if it's connected to the wrong terminal or if the input mode is correct. ● Check if the signal cable connection between video frequency source and the liquid crystal TV set is correct.
Deterioration of color phase or color tone	● Check if all the picture setups have been corrected.
Screen position or size is not proper	● Check is the screen position and size is correctly set up.
Picture is twisted and deformed	● Check to see if the picture-frame ratio is properly set up.

Symptoms	Possible cause
Picture color changed or colorless	● Check the “Component” or “RGB” settings of the liquid crystal TV set and make proper adjustment according to the signal types.
Picture too bright and there is distortion in the brightest area	● Check if the contrast setting is too high. ● Possibly the output quality of DVD broadcaster is set too high. ● It maybe also due to improper terminal connection of the video frequency signal in a certain position of the system.
Picture is whitish or too bright in the darkest area of the picture	● Check if the setting for the brightness is too high ● Possibly the brightness grade of DVD player (broadcaster) is set too high.
No picture or signal produced from the displayer if “XXX in search” appears.	● Check if the cable is disconnected. ● Check if it’s connected to the proper terminal or if the input mode is correct.
There appears an indication - “outside the receivable scope)	● Check if the TV set can receive input signal. The signal is not correctly identified and VGA format is beyond the specified scope.
Remote control cannot work properly	● Check if the batteries are installed in the reverse order. ● Check if the battery is effective. ● Check the distance or angle from the monitor. ● Check if there is any obstruct between the remote control and the TV set. ● Check if the remote control signal- receiving window is exposed to strong fluorescence.
No picture and sound, but only hash.	● Check if the antenna cable is correctly connected, or if it has received the video signal correctly.
Blur picture	● Check if the antenna cable is correctly connected. ● Of if it has received the right video signal.
No sound	● Check if the “mute” audio frequency setting is selected. ● Check if the sound volume is set to minimum. ● Make sure the earphone is not connected. ● Check if the cable connection is loose.
When playing VHS picture search tape, there are lines at the top or bottom of the picture.	● When being played or in pause VHS picture search tape sometimes can’t provide stable picture, which may lead to incorrect display of the liquid crystal TV, In this case please press “auto” key on the remote control so as to enable the liquid crystal TV set to recheck the signal and then to display correct picture signal

Troubleshooting guide


Begin
A red indicator lights?
No
Check power board, button board and power cord
Yes, turn the unit on
A blue indicator lights?
No
Check if the pin1 of X602 in data processing board is high level (+5V)?
Check V660/V661.
Yes
Display picture?
No
Check if the crystal in data processing board starts, DDR clock is correct?
Yes
Is the picture of each channel normal?
No
Check the signal inputted from the channel to pin IC or IC and its peripheral circuit or the output of LVDS is normal
Is the sound of each channel normal?
No
Check the signal inputted from the channel to pin IC is normal or IC(SGTV5810/MP7722) and its periphery is normal

(1) abnormal picture

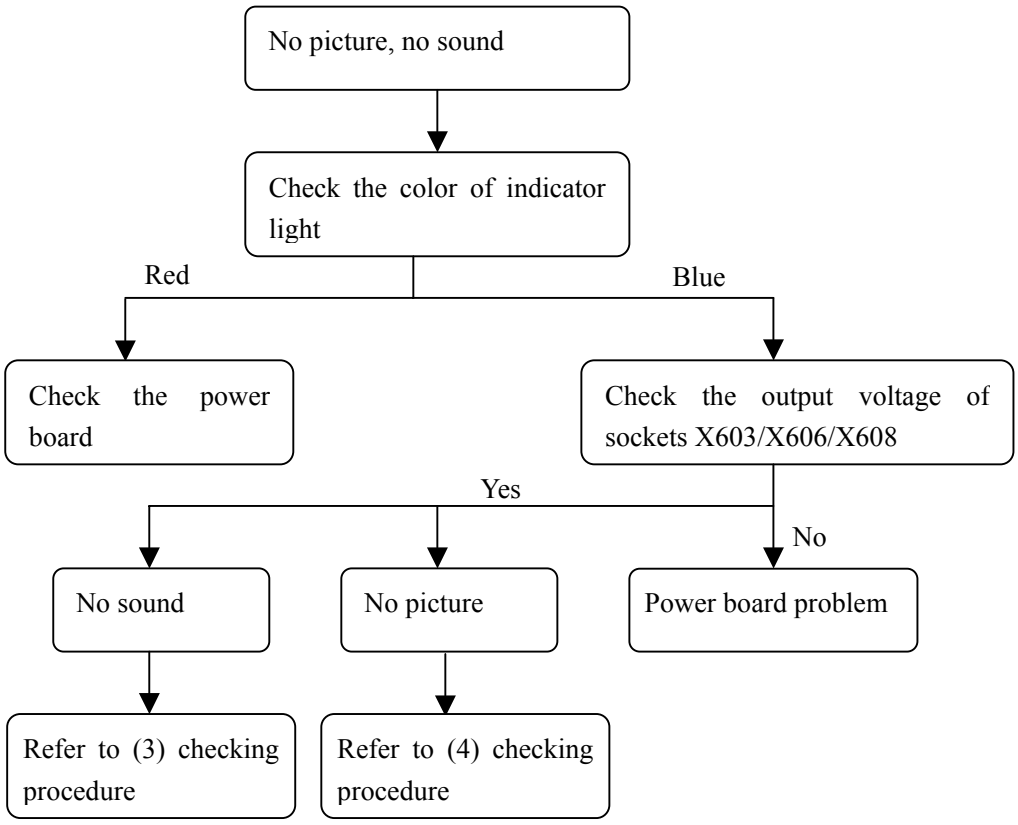
a) A certain differential wire pair of LVDS of XA50 (RX0+/-, RX1+/-, RX2+/-, RX3+/-)is abnormal, which may lead to lack of color or color splash.

b) Failure with resistor rows RA18~RA25, which may lead to loss of corresponding color from the gray degree corresponding to the picture of channel HDMI.

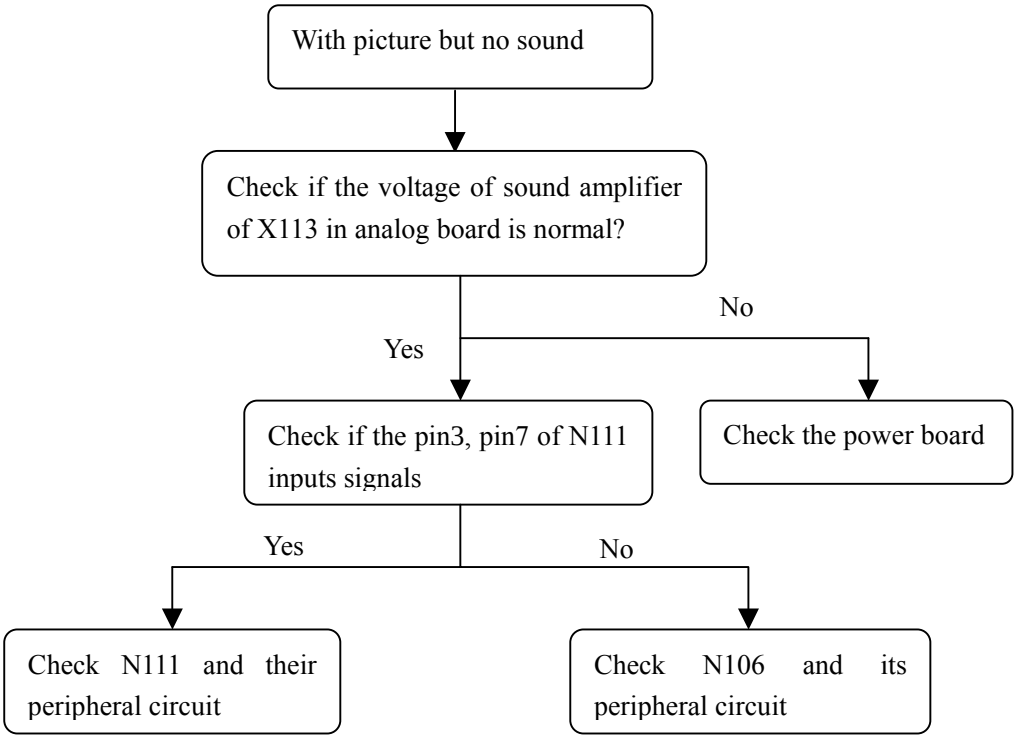
c) Failure with NA50 and its periphery components, which may lead to picture abnormal of PC, YPrPb and YCrCb.

d) Failure with N103, which may lead to picture abnormal of TV, AV1, AV2, S-VIDEO.

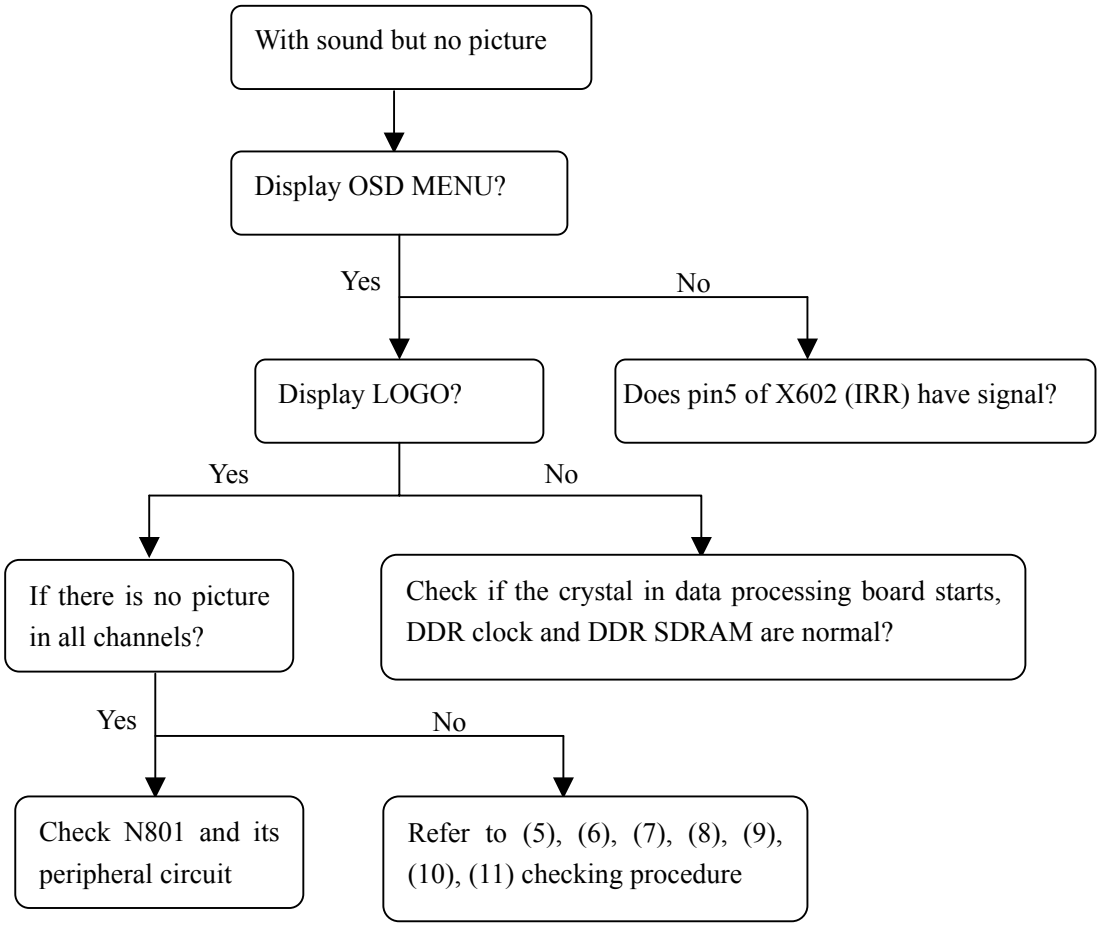
(2) no picture, no sound



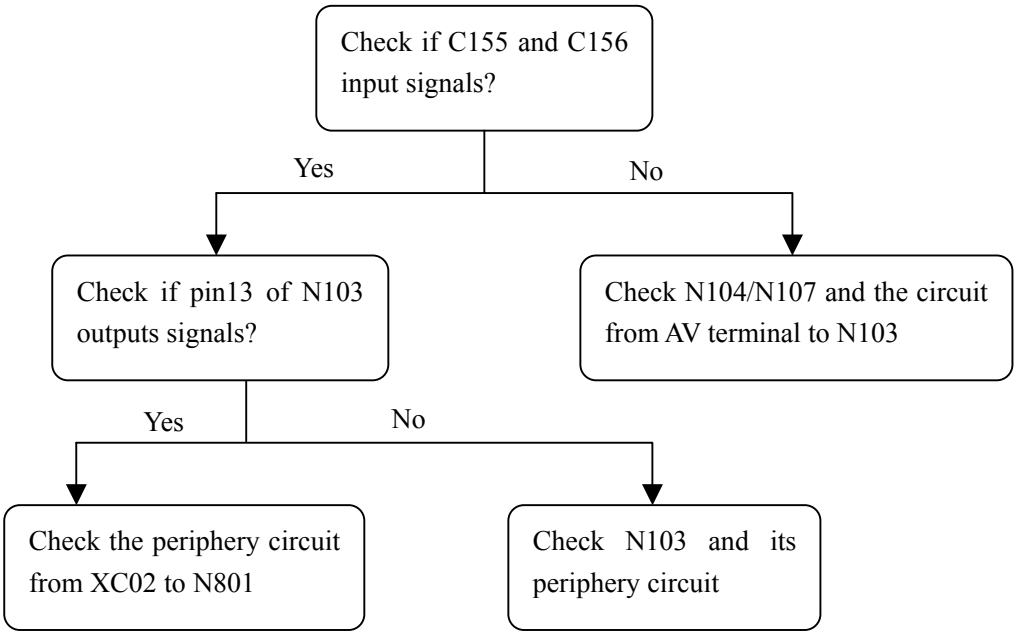
(3) with picture but no sound


With picture but no sound
Check if the voltage of sound amplifier of X113 in analog board is normal?
No
Yes
Check if the pin3, pin7 of N111 inputs signals
Check the power board
Yes
No
Check N111 and their peripheral circuit
Check N106 and its peripheral circuit

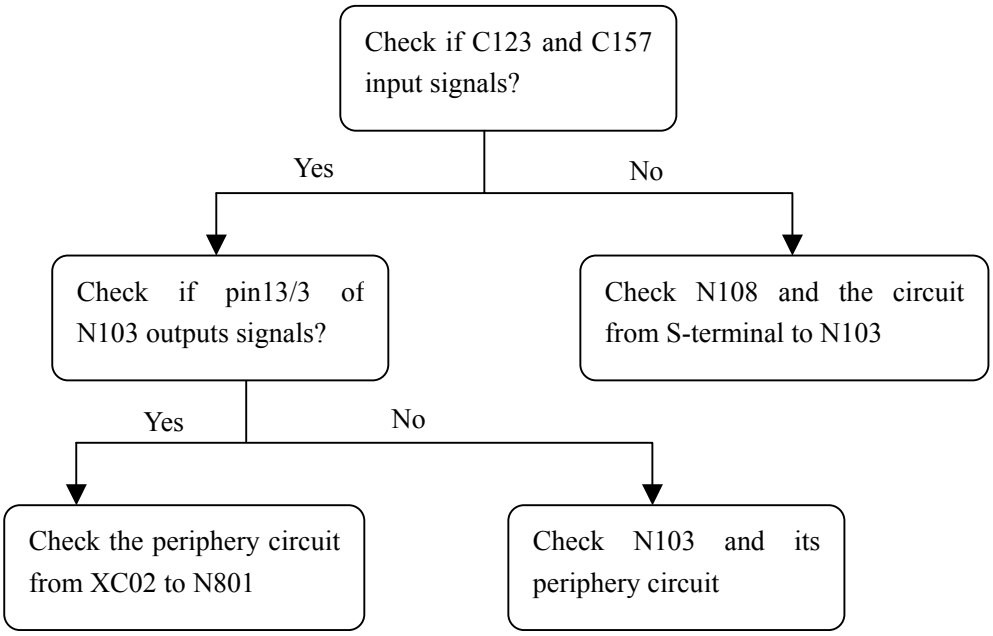
(4) with sound but no picture


With sound but no picture
Display OSD MENU?
Yes
No
Display LOGO?
Does pin5 of X602 (IRR) have signal?
Yes
No
If there is no picture in all channels?
Check if the crystal in data processing board starts, DDR clock and DDR SDRAM are normal?
Yes
No
Check N801 and its peripheral circuit
Refer to (5), (6), (7), (8), (9), (10), (11) checking procedure

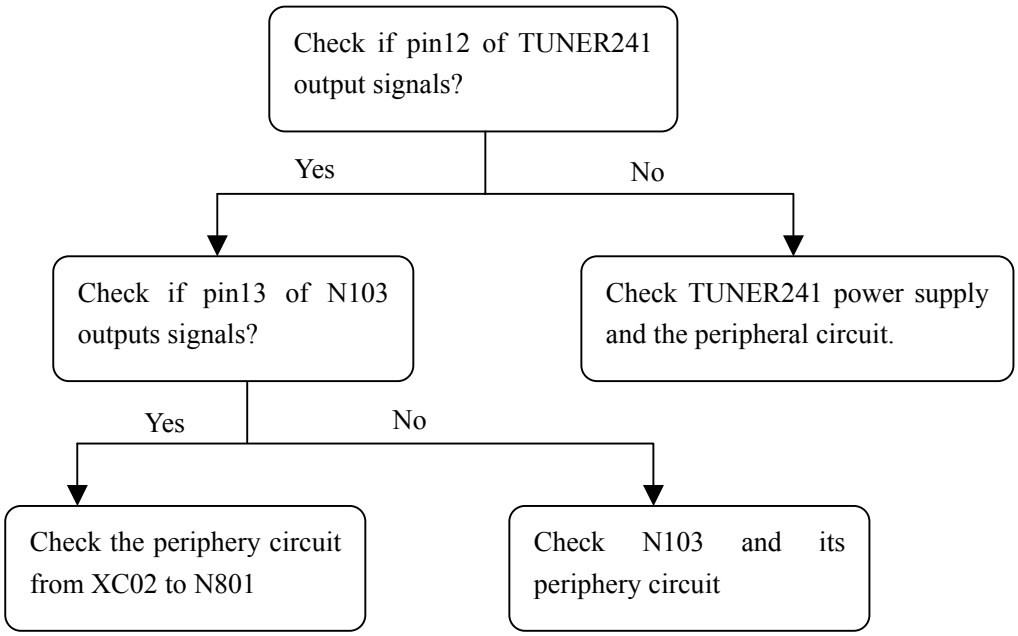
(5) AV no picture


Check if C155 and C156 input signals?
Yes
No
Check if pin13 of N103 outputs signals?
Check N104/N107 and the circuit from AV terminal to N103
Yes
No
Check the periphery circuit from XC02 to N801
Check N103 and its periphery circuit

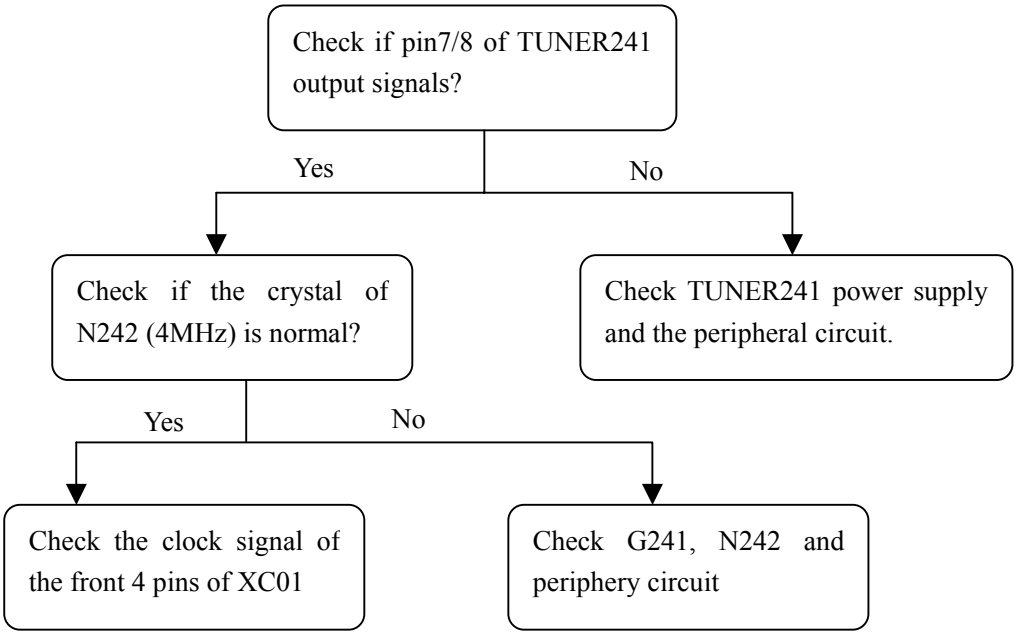
(6) S-terminal no picture


Check if C123 and C157 input signals?
Yes
No
Check if pin13/3 of N103 outputs signals?
Check N108 and the circuit from S-terminal to N103
Yes
No
Check the periphery circuit from XC02 to N801
Check N103 and its periphery circuit

(7) TV channel no picture


Check if pin12 of TUNER241 output signals?
Yes
No
Check if pin13 of N103 outputs signals?
Check TUNER241 power supply and the peripheral circuit.
Yes
No
Check the periphery circuit from XC02 to N801
Check N103 and its periphery circuit

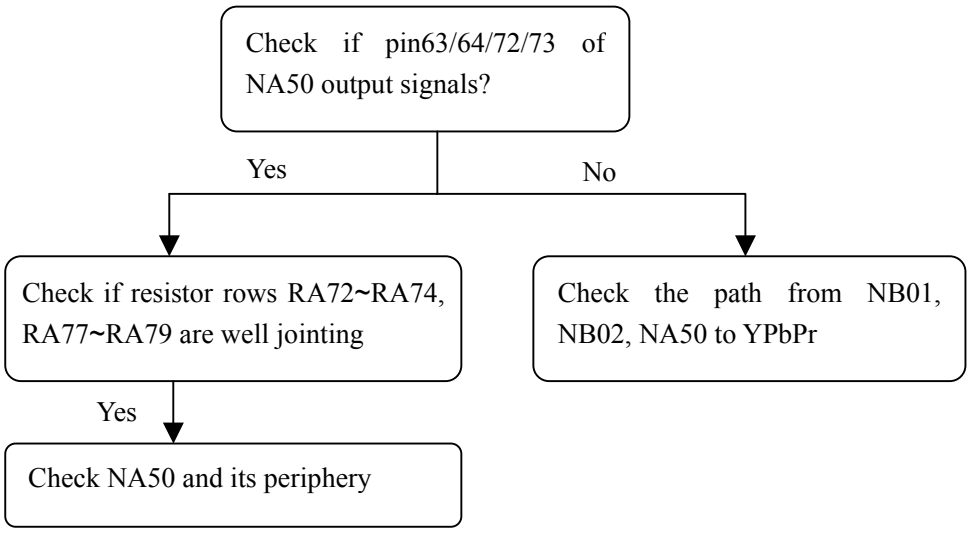
(8) DVB-T channel no picture


Check if pin7/8 of TUNER241 output signals?
Yes
No
Check if the crystal of N242 (4MHz) is normal?
Check TUNER241 power supply and the peripheral circuit.
Yes
No
Check the clock signal of the front 4 pins of XC01
Check G241, N242 and periphery circuit

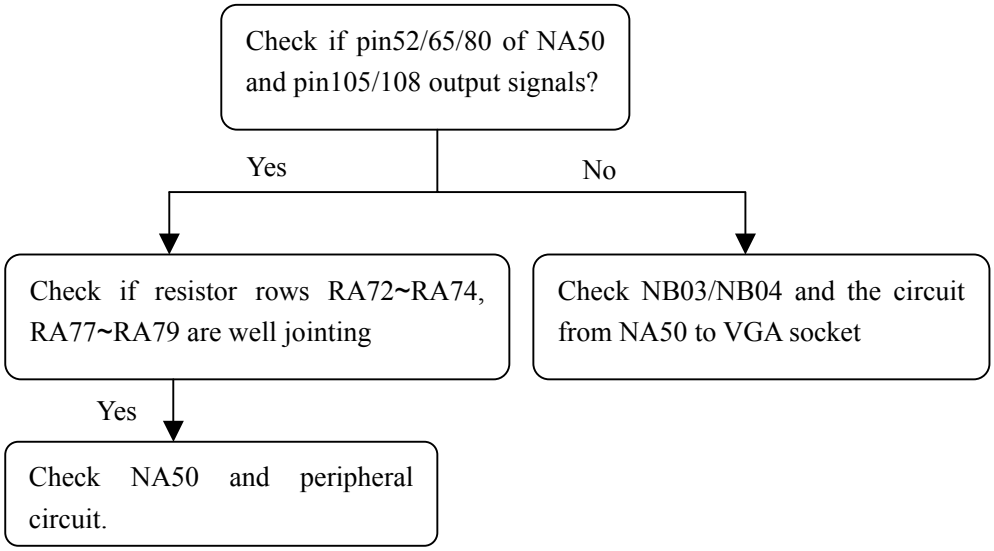
Note :

The I2C bus line control of TUNER is switch through the bus line of N242, so after checking the power supply and peripheral circuit of TUNER241, it is still no picture in TV and DVB-T channel, please check N242 emphatically.

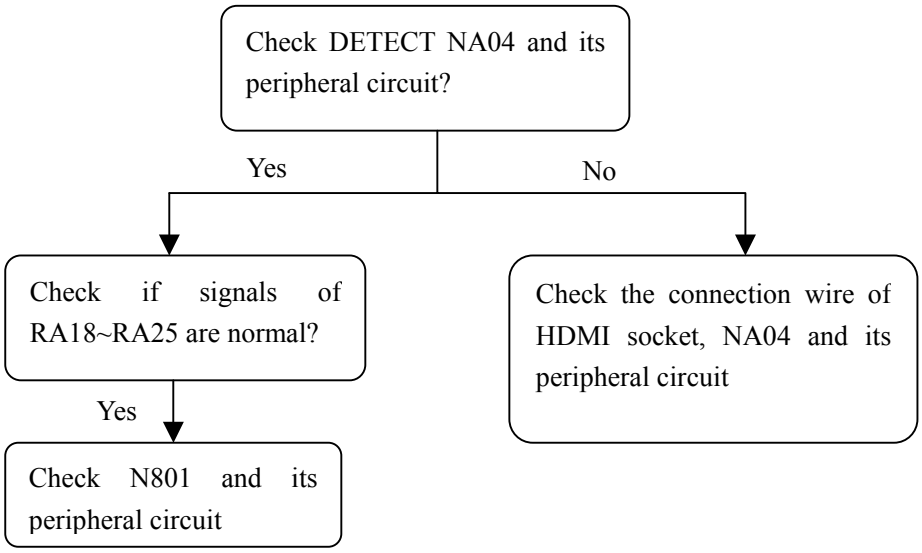
(9) YPrPb or YCrCb channel no picture


Check if pin63/64/72/73 of NA50 output signals?
Yes
No
Check if resistor rows RA72~RA74, RA77~RA79 are well jointing
Check the path from NB01, NB02, NA50 to YPbPr
Yes
Check NA50 and its periphery

(10) D-sub channel no picture


Check if pin52/65/80 of NA50 and pin105/108 output signals?
Yes
No
Check if resistor rows RA72~RA74, RA77~RA79 are well jointing
Check NB03/NB04 and the circuit from NA50 to VGA socket
Yes
Check NA50 and peripheral circuit.

(11) HDMI channel no picture


Check DETECT NA04 and its peripheral circuit?
Yes
No
Check if signals of RA18~RA25 are normal?
Check the connection wire of HDMI socket, NA04 and its peripheral circuit
Yes
Check N801 and its peripheral circuit

Note: N801 embeds FLASH, which stores HDCP information of HDMI, while EDID data stored in external EEPROM (NA02), so make sure the connection between HDMI socket and HDMI interface is well and the data of NA02 is well flash write, the picture and sound will display normally.

OPTION

N801
ZR39660
Guest Bus

N802
M29W320ET

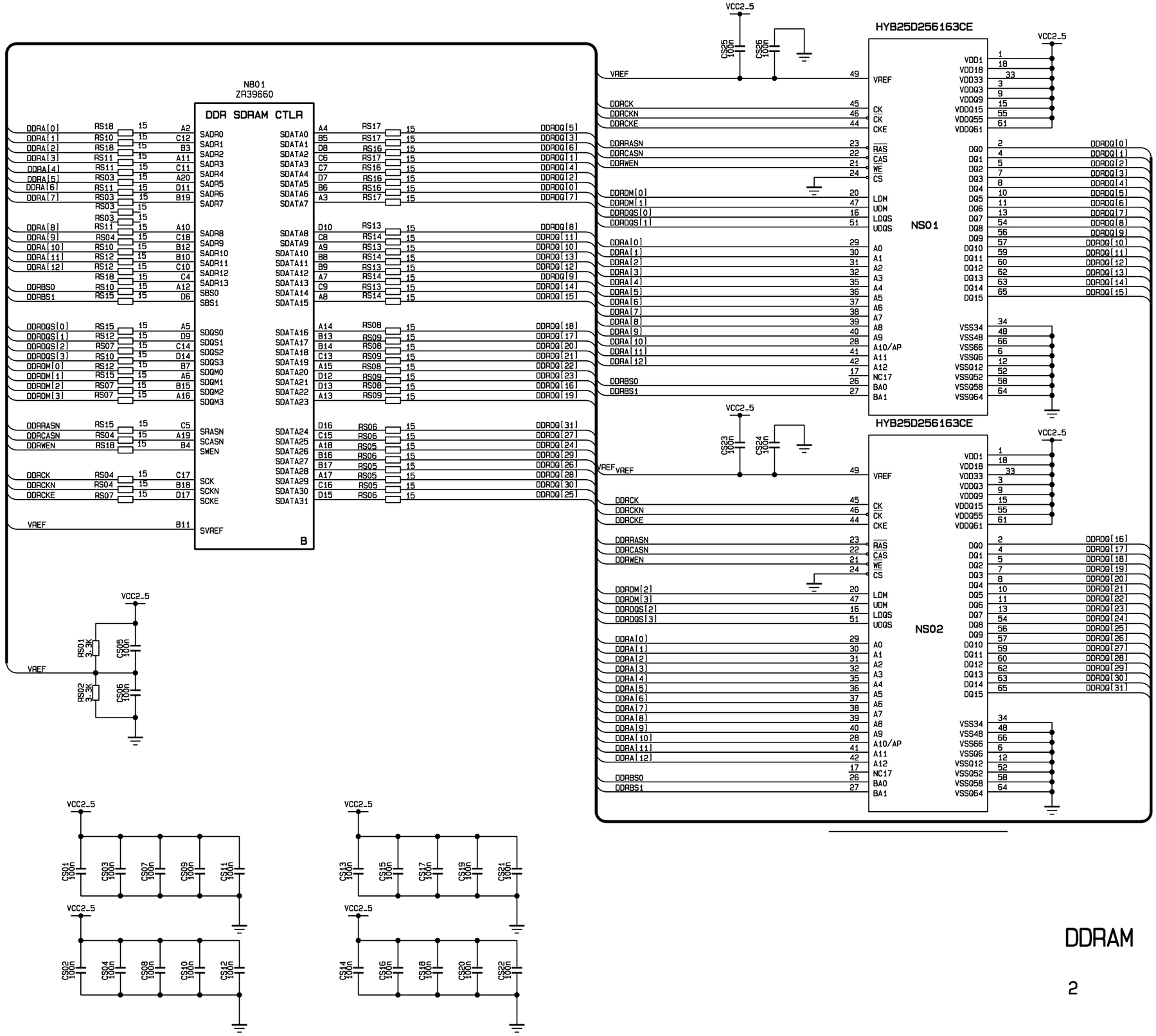
N801
ZR39660
Super I/O

N803
MAX3232CSE

LHZ-30S-B-060/014

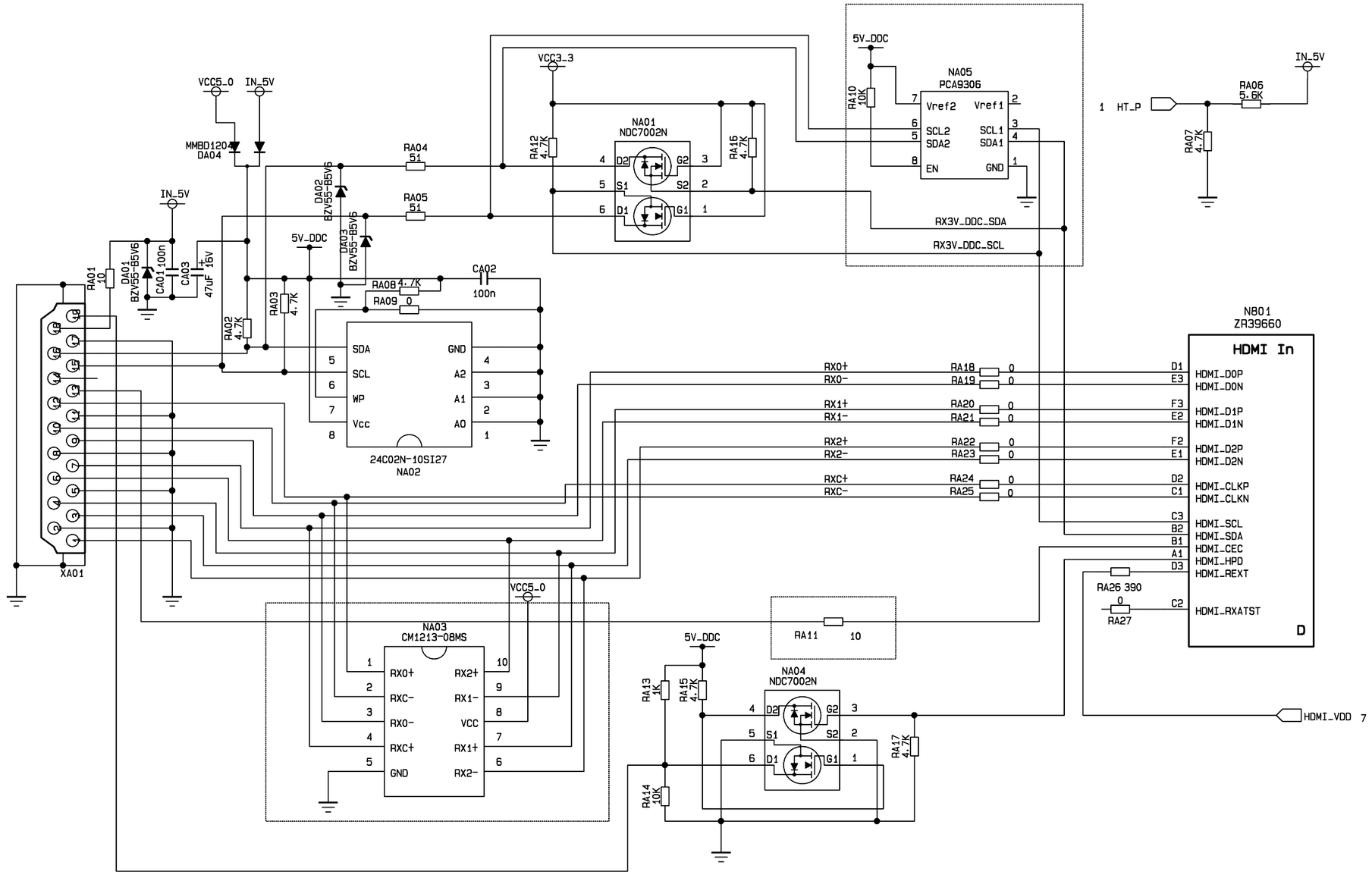
CPU/FLASH

1


NB01
ZA39660
DDR SDRAM CTLR
B
SVREF
VREF
VCC2_5
HYB25D256163CE
NS01
NS02
LDM
UDM
LDQS
UDQS
CK
CKE
RAS
CAS
WE
CS
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10/AP
A11
A12
NC17
BA0
BA1
VDD1
VDD18
VDD33
VDDQ3
VDDQ9
VDDQ15
VDDQ55
VDDQ61
VSS34
VSS48
VSS66
VSSQ6
VSSQ12
VSSQ52
VSSQ58
VSSQ64
DDRA[0]
DDRA[1]
DDRA[2]
DDRA[3]
DDRA[4]
DDRA[5]
DDRA[6]
DDRA[7]
DDRA[8]
DDRA[9]
DDRA[10]
DDRA[11]
DDRA[12]
DDRBS0
DDRBS1
DDRCK
DDRCKN
DDRCKE
DDRARASN
DDRACASN
DDRAWEN
DDRADM[0]
DDRADM[1]
DDRADM[2]
DDRADM[3]
DDRADQS[0]
DDRADQS[1]
DDRADQS[2]
DDRADQS[3]
DDRADQ[0]
DDRADQ[1]
DDRADQ[2]
DDRADQ[3]
DDRADQ[4]
DDRADQ[5]
DDRADQ[6]
DDRADQ[7]
DDRADQ[8]
DDRADQ[9]
DDRADQ[10]
DDRADQ[11]
DDRADQ[12]
DDRADQ[13]
DDRADQ[14]
DDRADQ[15]
DDRADQ[16]
DDRADQ[17]
DDRADQ[18]
DDRADQ[19]
DDRADQ[20]
DDRADQ[21]
DDRADQ[22]
DDRADQ[23]
DDRADQ[24]
DDRADQ[25]
DDRADQ[26]
DDRADQ[27]
DDRADQ[28]
DDRADQ[29]
DDRADQ[30]
DDRADQ[31]
RS01 3.3K
RS02 3.3K
CS01 100n
CS02 100n
CS03 100n
CS04 100n
CS05 100n
CS06 100n
CS07 100n
CS08 100n
CS09 100n
CS10 100n
CS11 100n
CS12 100n
CS13 100n
CS14 100n
CS15 100n
CS16 100n
CS17 100n
CS18 100n
CS19 100n
CS20 100n
CS21 100n
CS22 100n
CS23 100n
CS24 100n
CS25 100n
CS26 100n

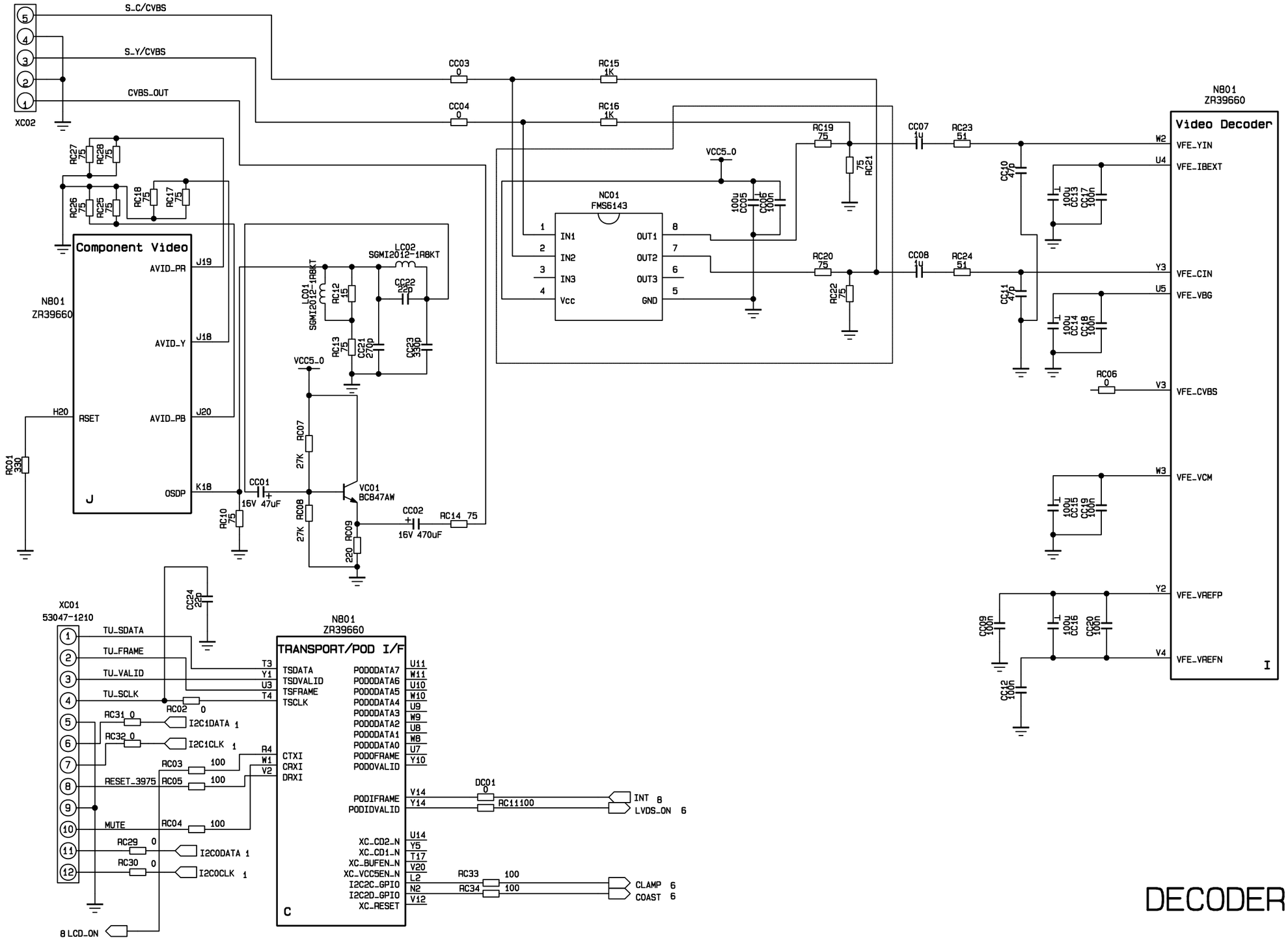
DDRAM

2


VCC5_0
IN_5V
MMBD120A
DA04
RA04
51
RA05
51
DA02
BZV55-B5V6
DA03
BZV55-B5V6
DA01
BZV55-B5V6
RA01
10
CA01 100n
CA03
47uF 16v
5V_DDC
VCC3_3
NA01
NDC7002N
RA12
4.7K
RA16
4.7K
RA08 4.7K
RA09 0
CA02
100n
RA02
4.7K
RA03
4.7K
SDA
SCL
WP
Vcc
GND
A2
A1
A0
24C02N-10SI27
NA02
XA01
NA05
PCA9306
RA10
10K
Vref2
Vref1
SCL2
SDA2
SCL1
SDA1
EN
GND
RX3V_DDC_SDA
RX3V_DDC_SCL
1 HT_P
RA06
5.6K
RA07
4.7K
N801
ZR39660
HDMI In
RX0+
RX0-
RX1+
RX1-
RX2+
RX2-
RXC+
RXC-
RA18 0
RA19 0
RA20 0
RA21 0
RA22 0
RA23 0
RA24 0
RA25 0
D1
E3
F3
E2
F2
E1
D2
C1
HDMI_D0P
HDMI_D0N
HDMI_D1P
HDMI_D1N
HDMI_D2P
HDMI_D2N
HDMI_CLKP
HDMI_CLKN
C3
B2
B1
A1
D3
C2
HDMI_SCL
HDMI_SDA
HDMI_CEC
HDMI_HPD
HDMI_REXT
HDMI_RXATST
D
RA26 390
0
RA27
HDMI_VDD 7
NA03
CM1213-08MS
RX0+
RXC-
RX0-
RXC+
GND
RX2+
RX1-
VCC
RX1+
RX2-
RA11 10
NA04
NDC7002N
RA13
1K
RA15
4.7K
RA17
4.7K
RA14
10K

HDMI

3


S_C/CVBS
S_Y/CVBS
CVBS_OUT
XC02
CC03 0
CC04 0
RC15 1K
RC16 1K
RC19 75
RC20 75
RC21 75
RC22 75
VCC5_0
NC01
FMS6143
IN1
IN2
IN3
Vcc
OUT1
OUT2
OUT3
GND
CC05 100u
CC06 100n
CC07 1u
CC08 1u
RC23 51
RC24 51
CC10 47p
CC11 47p
CC13 100u
CC17 100n
CC14 100u
CC18 100n
RC06 0
CC15 100u
CC19 100n
CC09 100n
CC16 100u
CC20 100n
CC12 100n
N801
ZR39660
Video Decoder
W2 VFE_YIN
U4 VFE_IBEXT
Y3 VFE_CIN
U5 VFE_VBG
V3 VFE_CVBS
W3 VFE_VCM
Y2 VFE_VREFP
V4 VFE_VREFN
I
RC27 75
RC28 75
RC26 75
RC25 75
RC18 75
RC17 75
Component Video
AVID_PR J19
AVID_Y J18
AVID_PB J20
OSDP K18
RSET H20
J
RC01 330
LC02
SGMI2012-1R8KT
LC01
SGMI2012-1R8KT
RC12 15
CC22 22p
RC13 75
CC21 270p
CC23 330p
VCC5_0
RC07 27K
RC08 27K
RC09 220
VC01
BCB47AW
CC01
16V 47uF
CC02
16V 470uF
RC10 75
RC14 75
CC24 22p
XC01
53047-1210
TU_SDATA
TU_FRAME
TU_VALID
TU_SCLK
RC02 0
RC31 0
RC32 0
I2C1DATA 1
I2C1CLK 1
RC03 100
RC05 100
RC04 100
RESET_3975
MUTE
RC29 0
RC30 0
I2C0DATA 1
I2C0CLK 1
8 LCD_ON
N801
ZR39660
TRANSPORT/POD I/F
TSDATA T3
TSDVALID Y1
TSFRAME U3
TSCLK T4
CTXI R4
CRXI W1
DRXI V2
PODODATA7 U11
PODODATA6 W11
PODODATA5 U10
PODODATA4 W10
PODODATA3 U9
PODODATA2 W9
PODODATA1 U8
PODODATA0 W8
PODOFRAME U7
PODOVALID Y10
PODIFRAME V14
PODIDVALID Y14
DC01 0
RC11 100
INT 8
LVDS_ON 6
XC_CD2_N U14
XC_CD1_N Y5
XC_BUFEN_N T17
XC_VCC5EN_N V20
I2C2C_GPIO L2
I2C2D_GPIO N2
XC_RESET V12
RC33 100
RC34 100
CLAMP 6
COAST 6
C

DECODER

AV3-14MD XB07
AV3-14MD XB08
NB01 PESD5V0L4UG
NB02 PESD5V0L4UG
CB29 100n
CB30 100n
RB33 0 HD1_Y 6
RB34 0 HD1_PB 6
RB35 0 HD1_PR 6
RB36 0 HD2_PR 6
RB37 0 HD2_Y 6
RB38 0 HD2_PB 6
RB17 75
RB18 75
RB19 75
RB20 75
RB21 75
RB22 75
NB03 74LVC14A
VCC3_3
RGB_VSYNC 6
RGB_HSYNC 6
N801 ZR39650 Audio
ADATAI0 ADATAI1 ADATAI2_DDXLA
ACLK BCLK LRCLK
ADATAO0_DDXLB ADATAO1_DDXRA ADATAO2_DDXRB
IEC958
RB58 22
RB59 22
RB60 22
RB27 22
RB72 0
I2SA_IN_DATA 1
I2SA_IN_LRCLK 1
I2SA_IN_SCLK 1
I2SA_IN_MCLK 1
RB66 10K
RB67 10K
RB68 10K
VCC5_0
NB10 GP1FA550TZ
GND IN Vcc
RB73 0 SPDIF_IN 1
NB09 CS4344
AOUTR AOUTL VA GND FILT+
SDIN DEM/SCLK LRCK MCLK VQ
LB03 BG2012D151T
CB21 3.3uF 50V
CB22 100n
CB24 10uF 16V
CB26 100n
CB27 3.3uF
CB20 3.3uF 50V
RB57 470
RB63 470
CB28 3.3uF 50V
RB55 220K
RB56 10K
CB23 2.7n
CB25 2.7n
RB64 10K
RB65 220K
VGA_VCC
H_SYNC 8
V_SYNC 8
RB05 2.2K
RB16 2.2K
XB02 HDF-15S-3
RB12 0
RB13 0
RB14 0
RB01 75
RB04 75
RB07 75
H_SYNC
V_SYNC
NB04 PESD5V0L5UY
RB10 100 RGB_YPBPR_SEL
RB11 100 YPBPR1_YPBPR2_SEL
VGA_R VGA_R 6
VGA_G VGA_G 6
VGA_B VGA_B 6
RB25 100
RB26 100
NB06 24LC21A/SN
NC1 NC2 NC3 VSS
VCC VCLK SCL SDA
DB01 MMBD1204
CB19 100n
RB52 4.7K
RB53 4.7K
RB54 4.7K
RB70 0
YPBPR1_AUDIO AV2D5-1 XB04
RB02 10K
CB01 47p
RB03 10K
CB02 47p
PC_AUDIO XB05 JY-3541L-01-030
RB09 10K
CB03 47p
RB09 10K
CB04 47p
XB01 TJC10-09A
DIGITAL_LIN
DIGITAL_RIN
YPBPR1_LIN
YPBPR1_RIN
VGA_LIN
VGA_RIN

INTERFACE

5

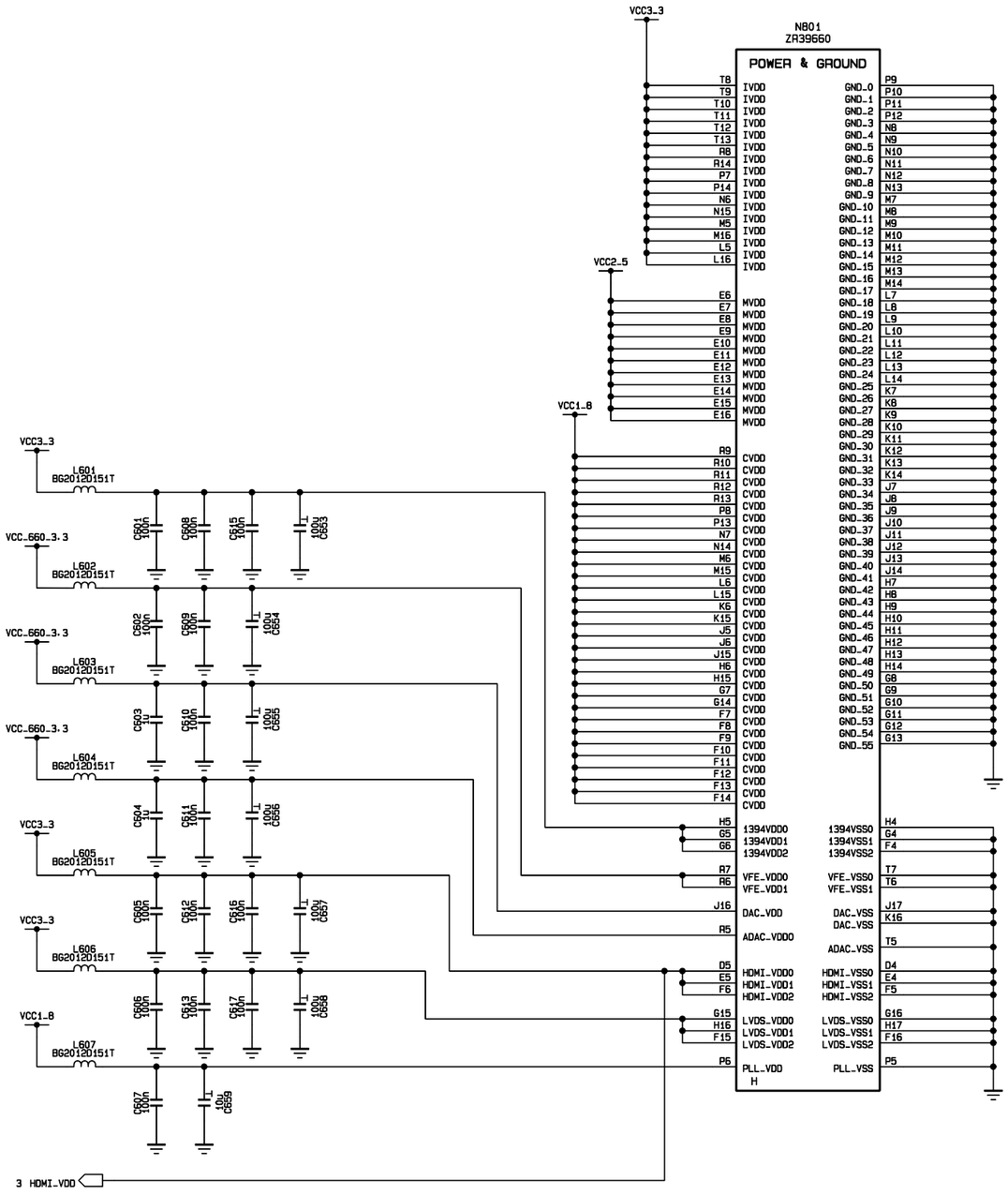
N801
ZR39660

Digital Video

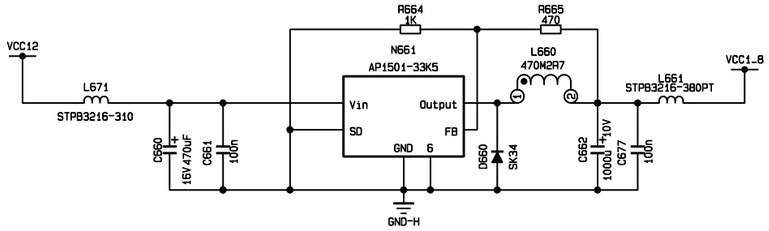
NA50
TDA8759

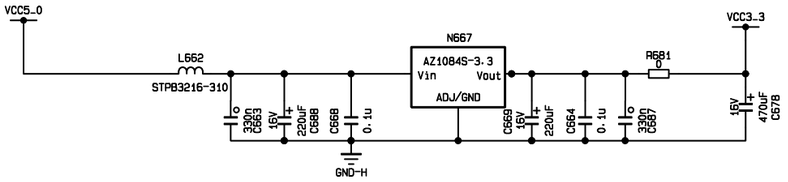
XA50
FI-WE31P-HF

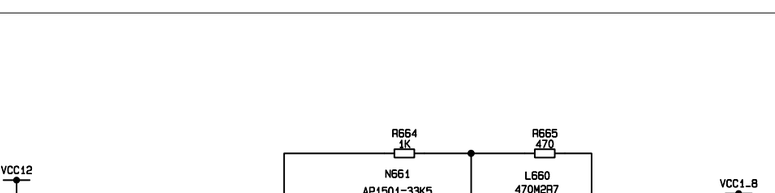
TDA8759

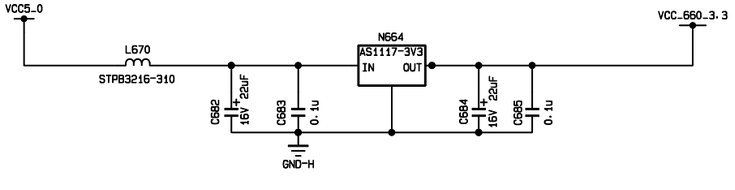

N801
ZR39660
POWER & GROUND
VCC3_3
VCC2_5
VCC1_8
IVDD
MVDD
CVDD
1394VDD0
1394VDD1
1394VDD2
VFE_VDD0
VFE_VDD1
DAC_VDD
ADAC_VDD0
HDMI_VDD0
HDMI_VDD1
HDMI_VDD2
LVDS_VDD0
LVDS_VDD1
LVDS_VDD2
PLL_VDD
GND_0
GND_1
GND_2
GND_3
GND_4
GND_5
GND_6
GND_7
GND_8
GND_9
GND_10
GND_11
GND_12
GND_13
GND_14
GND_15
GND_16
GND_17
GND_18
GND_19
GND_20
GND_21
GND_22
GND_23
GND_24
GND_25
GND_26
GND_27
GND_28
GND_29
GND_30
GND_31
GND_32
GND_33
GND_34
GND_35
GND_36
GND_37
GND_38
GND_39
GND_40
GND_41
GND_42
GND_43
GND_44
GND_45
GND_46
GND_47
GND_48
GND_49
GND_50
GND_51
GND_52
GND_53
GND_54
GND_55
1394VSS0
1394VSS1
1394VSS2
VFE_VSS0
VFE_VSS1
DAC_VSS
ADAC_VSS
HDMI_VSS0
HDMI_VSS1
HDMI_VSS2
LVDS_VSS0
LVDS_VSS1
LVDS_VSS2
PLL_VSS
L601 BG2012D151T
L602 BG2012D151T
L603 BG2012D151T
L604 BG2012D151T
L605 BG2012D151T
L606 BG2012D151T
L607 BG2012D151T
VCC_660_3.3
3 HDMI_VDD
C618 100n
C622 1u
C626 100n
C630 100n
C634 1u
C638 100n
C642 100n
C646 1u
16V 10uF C650
16V 10uF C652
C619 100n
C623 1u
C627 100n
C631 100n
C635 1u
C639 100n
16V 10uF C643
16V 10uF C647
16V 10uF C651
C620 100n
C624 1u
C628 100n
C632 100n
C636 1u
C640 100n
16V 470uF C644
16V 10uF C648
C621 100n
C625 1u
C629 100n
C633 100n
C637 1u
C641 100n
16V 10uF C645
16V 10uF C649

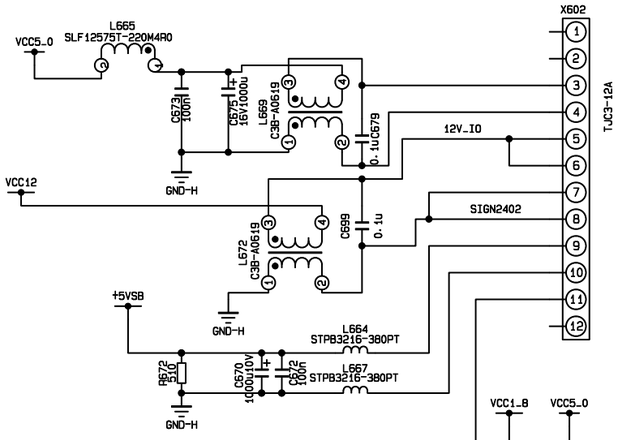
660POWER

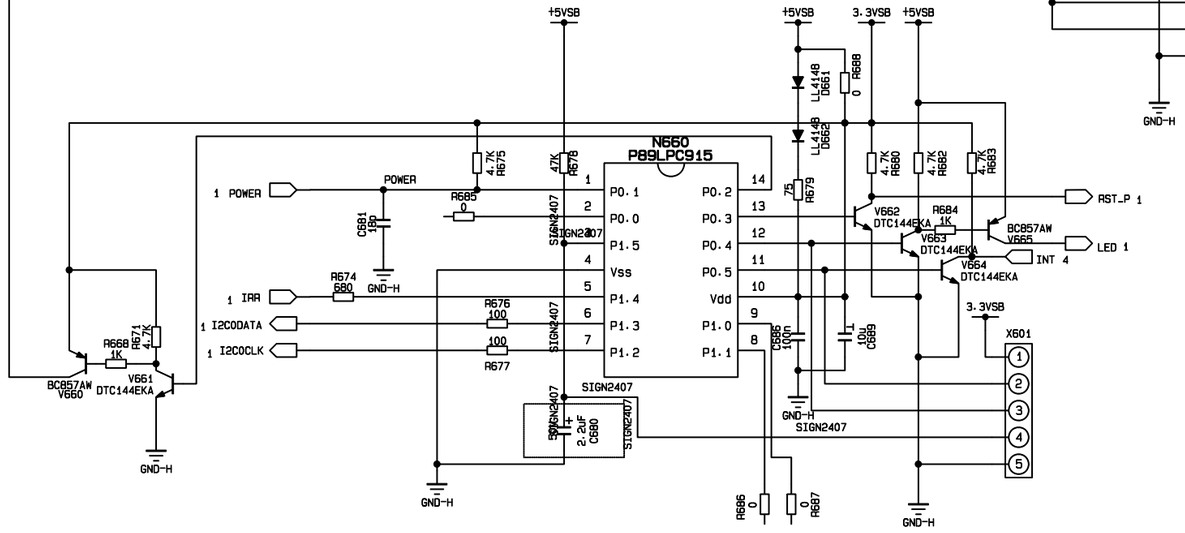

VCC12
L671
STPB3216-310
R664
1K
R665
470
N661
AP1501-33K5
Vin
Output
SD
FB
GND 6
L660
470M2R7
L661
STPB3216-380PT
VCC1_8
C660
16V 470uF
C661
100n
D660
SK34
C662
1000u
10V
C677
100n
GND-H


VCC5_0
L662
STPB3216-310
N667
AZ1084S-3.3
Vin
Vout
ADJ/GND
R681
0
VCC3_3
C663
330n
C666
16V
220uF
C668
0.1u
C669
16V
220uF
C664
0.1u
C667
330n
C678
16V
470uF
GND-H


VCC5_0
L663
STPB3216-310
N663
AS1117-2V5
IN
OUT
R673
0
VCC2_5
C666
330n
C667
16V
22uF
C671
0.1u
C674
16V
22uF
C676
0.1u
330n
GND-H


VCC5_0
L670
STPB3216-310
N664
AS1117-3V3
IN
OUT
VCC_660_3.3
C682
16V
22uF
C683
0.1u
C684
16V
22uF
C685
0.1u
GND-H


VCC5_0
L665
SLF12575T-220M4R0
C673
100n
C675
16V10000u
L669
C3B-A0619
C679
0.1u
X602
TJC3-12A
12V_IO
VCC12
SIGN2402
L672
C3B-A0619
C699
0.1u
GND-H
+5VSB
L664
STPB3216-380PT
R672
510
C670
1000u10V
C671
100n
L667
STPB3216-380PT


VCC1_8
VCC5_0
X603
+5VSB
3.3VSB
LL4148
D661
R688
0
LL4148
D662
N660
P89LPC915
4.7K
R675
47K
R678
POWER
R685
0
C681
18p
SIGN2407
R674
680
IRR
I2CODATA
I2COCLK
R676
100
R677
100
R671
4.7K
R668
1K
BC857AW
V660
DTC144EKA
V661
C680
2.2uF
R679
75
4.7K
R680
4.7K
R682
4.7K
R683
V662
DTC144EKA
R684
1K
BC857AW
V665
V663
DTC144EKA
V664
DTC144EKA
RST_P 1
LED 1
INT 4
C685
100n
C689
10u
X601
R686
0
R687
0
GND-H

POWER

8

SGTV58xy

N106

N103 HEF4052BT

N102

N104

N107

N108

N109

N110

N111 MP7732

N112 NP1412

N113 NUM1106

X102

X103

X104 TJC10-09A

X105 TJC2-04A

X106

X107 AV205-1

X108 AV3-14MKD

X109 AV3-14MKD

X110 AV3-14MKD

X111 JY-3614L-01-030

X113

V101 BC847AM

V102 BC847AM

V103 BC847AM

V104 BC857AM

V105 BC847AM

V108 BC3878

V109 KSE180

D101 MBRS1307T3

D102 MBRS1307T3

D103 MBRS1307T3

D104 LL4148

D105 MBRS1307T3

D106 MBRS1307T3

D107 SK34

D108 LL4148

D109 LL4148

D110 SK34

D111 LL4148

D112 LL4148

D113 HZ7B2

L101 22UH

L102 22uH

L103 22uH

L104

L105 22uH

L106 DASL9838N-1003

L107 DASL9838N-1003

L108 SLF7045T-470M1R4-PF

L109 RL-28

L110 RL-28

L111 SLF7045T-101M2R5-PF

L112 SLF7045T-470M1R4-PF

L113 CSB-M0618

L114 CSB-M0618

L115 CSB-M0618

Y101 24.576MHZ

PESD5V0L5UY

PESD5V0L5UY

PESD5V0L5UY

PESD5V0L5UY

DKRS-SK-2

SIF FILTER

NEAR PIN57-68-76 ANALOG FILTER

AV1_S

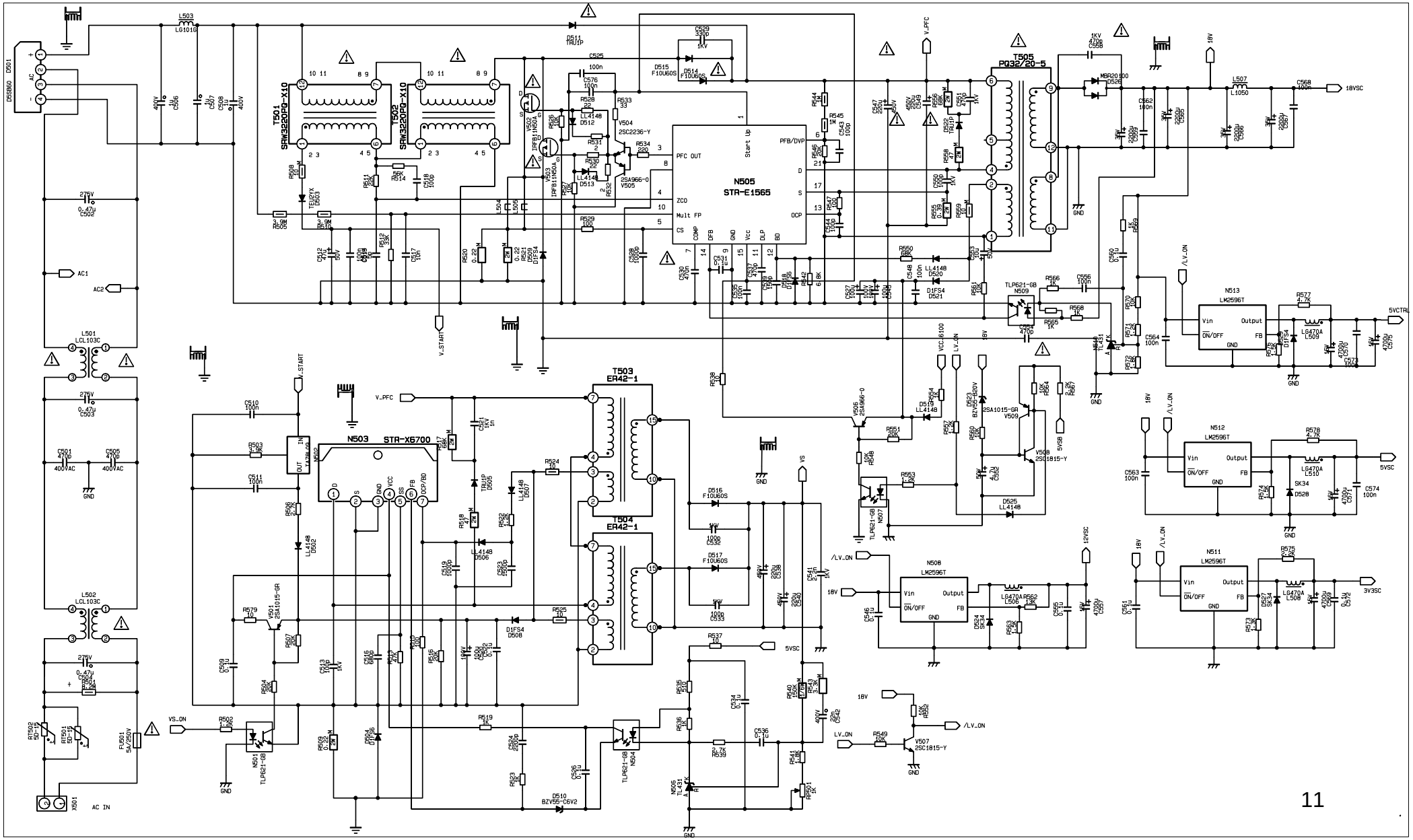
AV1

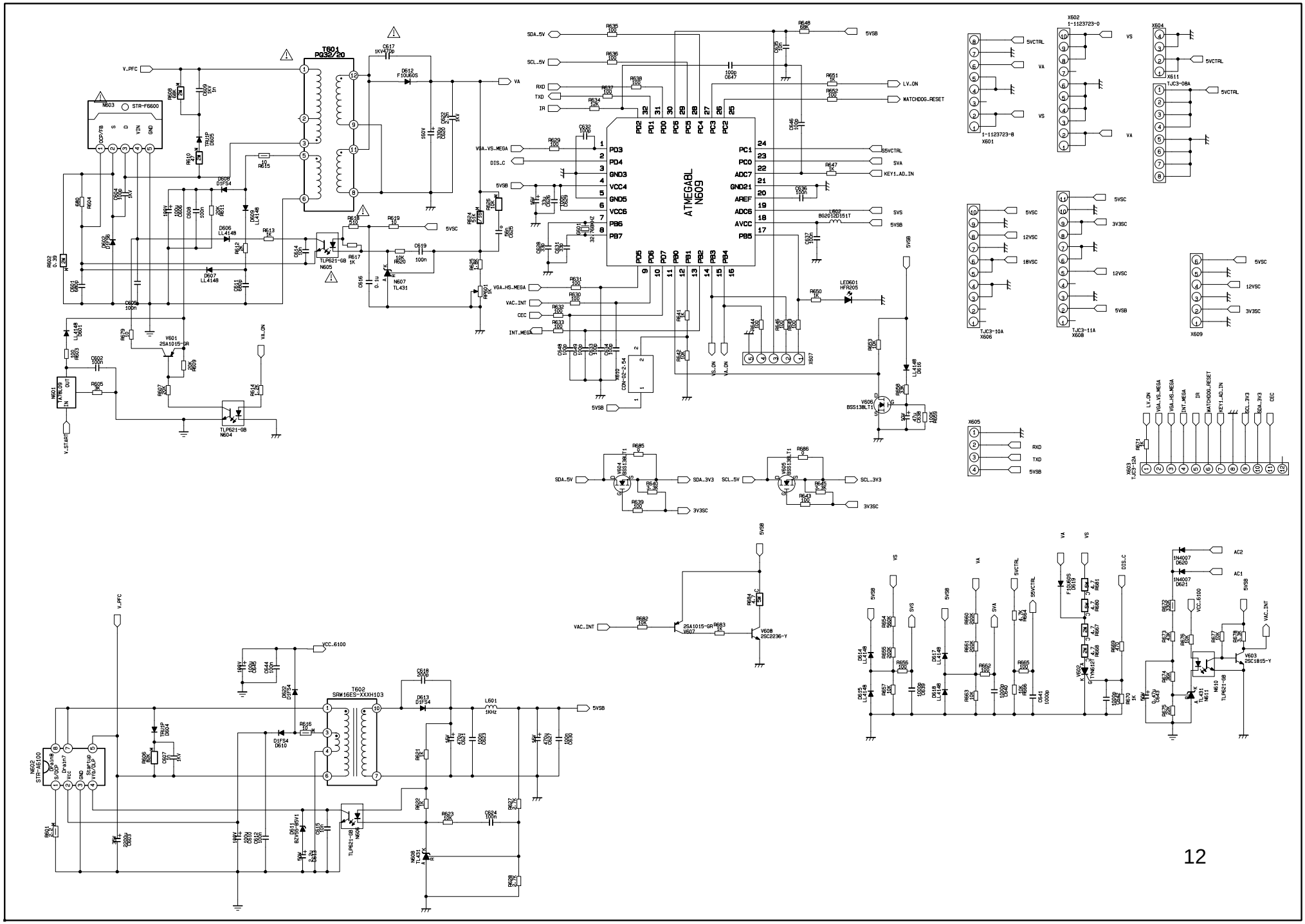
AV2

VIDEO&AUDIO

9

TUNER241
FQD1216ME/PH-5
NC
ANT+5V
TUNER+5V
IF+5V
SCL
SDA
AS_TUNER+5VP
AS_IF
IFAGC
IFOUT1
IFOUT2
SIF
CVBS
AF/MPX
TH1
TH2
TH3
TH4
R243 10K
GND-A
SIF
TU_CVBS
R244 75
L241 22uH
L242 22uH
5V_OREN
1000u 10V C241
C242 100n
C243 1000u 10V
C244 100n
C245 1000u 10V
C246 100n
C249 100n
C250 100n
R245 3.3K
R246 3.3K
R271 0
R272 0
1.8V-A
3.3V-A
1.8V-D
3.3V-D
R253 10K
R254 10K
DRX3975D-QI-B1
N242
MD_7 MD_6 MD_5 MD_4 MD_3 MD_2 MD_1 MD_0 VDDH24 VSSH23 MERR MSTRT VSSL20 VDDL19 MVAL MCLK
SDA2 SCL2 VDDL35 VSSL36 VDDAH INP INN VSSAH PDP PDN VDDAL43 VSSAL44 RES SUBA VDDAL47 VSSAL48
SDA1 SCL1 VDDH14 VSSH13 NC12 NC11 NC10 NC9 NC8 NC7 NC6 NC5 VSSL4 VDDL3 RSTN IRQN
NC49 NC50 VDDL51 VSSL52 ASEL UIO VSSH55 XO XI VDDH58 TDO TMS TCK TDI AGC1 AGC2
I2C1DATA
I2C1CLK
RESET_3975
33 R255
TU_SDATA
TU_VALID
TU_FRAME
TU_SCLK
R256 33
R257 33
R258 33
MUTE
53047-1210 X242
+5V
+3.3V
I2C0CLK
I2C0DATA
R259 10K
R260 10K
N243
NDC7002N
SCL
SDA
4MHz G241
C253 30p
C254 30p
3.3V-A
R247 18K
R248 10K
R250 820
R251 180
R249 15K
C251 22n
C252 22n
N241
AS1117-3V3
IN OUT
3_3V
L243 STPB3216-310
C255 10V 100u
C256 100n
C257 10V 100u
C258 100n
L244 STPB3216-310
L249 STPB3216-310
L250 STPB3216-310
L251 STPB3216-310
L252 STPB3216-310
L253 STPB3216-310
1_8V L245 STPB3216-190PT
C259 22u
C260 100n
C261 100n
C262 100n
C263 100n
1_8V L246 STPB3216-190PT
C264 10p
C265 100n
3_3V L247 STPB3216-190PT
C266 22u
C267 100n
C268 100n
C269 100n
3_3V L248 STPB3216-190PT
C270 10p
C271 100n
Bypassing:DRX 3975D
X241
1_8V
5V_OREN
+9V
S_Y/CVBS
C272 10u 16V
R261 22K
R262 22K
470 R263
470 R264
V241 BC847AW
BC857AW V242
R265 470
2.2K R266
16V 47u C273
R267 10K
R268 6.8K
R269 120
C274 220u 16V
R270 75
BC857AW V243
CVBS_OUT
TUNER@DEMODU
10

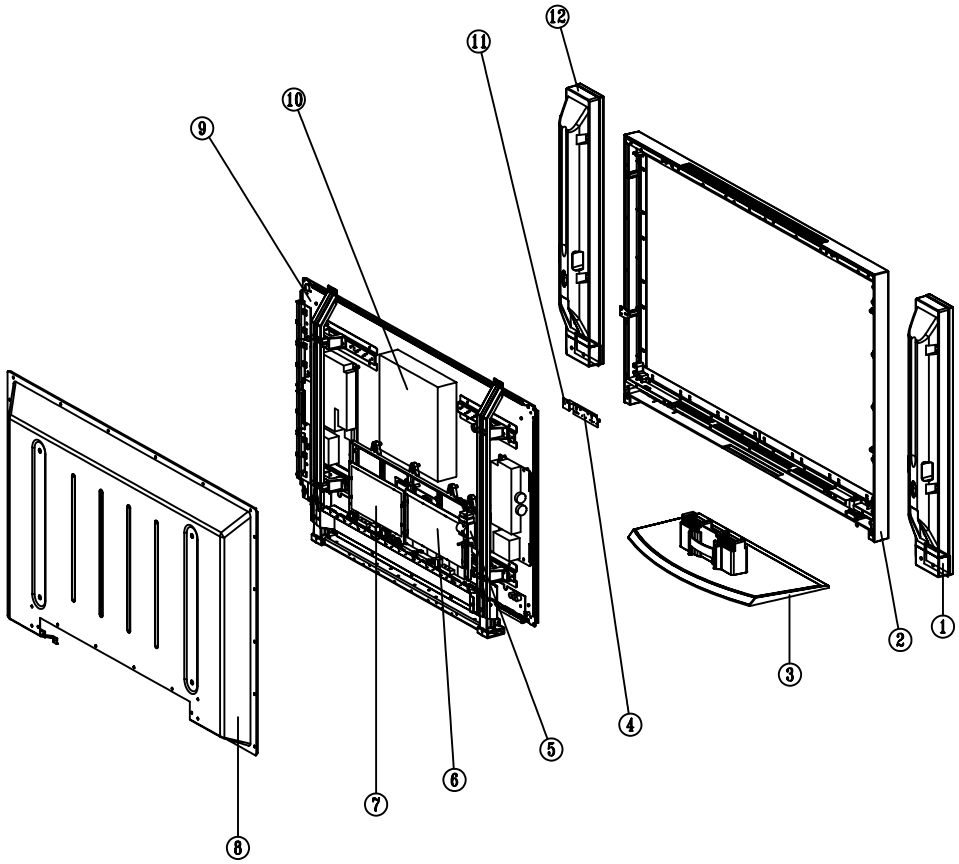

N505
STR-E1565
N503
STR-X6700
T501
SRW3220PG-X10
T502
SRW3220PG-X10
T503
ER42-1
T504
ER42-1
T505
P032/20-5
N508
LM2596T
N509
TLP621-GB
N511
LM2596T
N512
LM2596T
N513
LM2596T
AC IN
18VSC
12VSC
5VSC
3V3SC
5VCTRL
/LV_ON
V_PFC
V_START
VS_ON


T601
PQ32/20
N603
STR-F6600
ATMEGA8L
N609
PD3
PD4
GND3
VCC4
GND5
VCC6
PB6
PB7
PC1
PC0
ADC7
GND21
AREF
ADC6
AVCC
PB5
5VSB
VA
V_PFC
V_START
VA_ON
VS_ON
5VSC
5VCTRL
SVA
SVS
3V3SC
12VSC
18VSC
LV_ON
WATCHDOG_RESET
KEY1_AD_IN
IR
RXD
TXD
SDA_5V
SCL_5V
SDA_3V3
SCL_3V3
VGA_VS_MEGA
VGA_HS_MEGA
DIS_C
VAC_INT
CEC
INT_MEGA
T602
SRW16ES-XXXH103
N602
STR-A6100
VCC_6100
VAC_INT
X601
X602
X603
X604
X605
X606
X608
X609
X611
V601
2SA1015-GR
V602
2SC2236-Y
V603
2SC1815-Y
V604
BSS138LT1
V605
BSS138LT1
V606
BSS138LT1
V607
V608
V609
N601
N604
TLP621-GB
N605
TLP621-GB
N606
TLP621-GB
N607
TL431
N608
TL431
N610
TLP621-GB
LED601
HFR205
X607
CON-QC-2.54
X610
CON-QC-2.54
X612
TJC3-12A

APPENDIX-A: Main assembly PDP-42XR7Z

NAME	NO.	MAIN COMPONENT AND IT'S NO.	
Analog board	XI6HB00753B0	N106 N242 N111	SGTV5810 (5275810001) DRX3975D (5273975001) MP7722DF (5277722001)
Digital processing board	XI6HB0076910	NA50 N801	TDA8759H (5278759001) ZR39660 (5270660001)
Key board	XI6FB0200510		
IR board	XI6HA0160910		
Power filter board	XI6FK0105110		
Power board	XI6HB0062010		
Remote control	XI6010J01202	RC-J12-0B	
Panel	XI5205422103	S42AX-YB03	

PDP-42XR7Z



PART LIST OF EXPLODED VIEW (PDP-42XR7Z)

NO.	DESCRIPTION
1	Left speaker
2	Front cabinet
3	Stand
4	Key board
5	Power filter board
6	Analog board
7	Digital processing board
8	Back cabinet
9	Panel
10	Power board
11	IR board
12	Right speaker
13	User manual
14	Remote Control

PARTS LIST

REF. No.	PARTS No.	DESCRIPITON	Q'TY	REMARK
1	XI6170762030	Left speaker	1	
2	XI66I07R5040	Front cabinet	1	
3	XI6151063830	Stand	1	
4	XI6FB0200510	Key board	1	
5	XI6FK0105110	Power filter board	1	
6	XI6HB00753B0	Analog board	1	
7	XI6HB0076910	Digital processing board	1	
8	XI5HI31LJ01B	Back cabinet	1	
9	————	Panel	1	S42AX-YB03
10	XI6HB0062010	Power board	1	
11	XI6HA0160910	IR board	1	
12	XI6170763030	Right speaker	1	
13	XI5944031730	User manual	1	
14	XI6010J01202	Remote control	1	

- Only the parts in above list are used for repairing.
- Other parts except the above parts can't be supplied.

Feb./'08

Feb/2008

SANYO Electric Co., Ltd.